1920. [No. 25.

Tuesday, 6th July.

[Registered at the General Post Office, Melbourne, for transmission by post as a newspaper.]

THE
Australian Official Journal of Patents.

SEAL OF THE PATENT OFFICE COMMONWEALTH OF AUSTRALIA

ICE (including postage):—Single Copy, 6d. Annual Subscription (including volume of Statisti and Indexes), 25s. Obtainable at the Government Printing Office, Melbourne.

By Authority:
Albert J. Mullett, Government Printer, Melbourne.

The Supreme Obligation

Which rests on every Australian citizen is to help in the work of Repatriation. The boys have done their part; it is our turn now. Australia has the opportunity of setting an example to the world in a just and generous treatment of the returned soldier. Everyone can help in discharging this great obligation by investing in the new issue of

War Savings Certificates

£5 3s. per cent. Compound Interest.

HOW THE MONEY GROWS

12s. will make **£1** in 10 years
£6 will make **£10** in 10 years
£60 will make **£100** in 10 years
15s. 6d. will make **£1** in 5 years
£7 15s. will make **£10** in 5 years
£77 10s. will make **£100** in 5 years

War Savings Certificates

£5 3s. per cent. Compound Interest.

By purchasing the New Issue of War Savings Certificates an absolutely safe investment is secured together with a liberal rate of interest. The Certificates, in case of need, can be cashed at any time at any Bank.

NOW ON SALE AT ALL BANKS AND POST OFFICES

For further information write to the Secretary, Victorian War Savings Committee, 123 Queen Street, Melbourne.

The Australian Official Journal of Patents

[*Registered at the General Post Office, Melbourne, for transmission by post as a newspaper.*]

VOL. 32.] 6TH JULY, 1920. [NO. 25.

All communications to be addressed to the Commissioner of Patents, Railway Buildings, Melbourne, Victoria.

[The Department of Patents does not guarantee the accuracy of its publications, or undertake any responsibility for errors or omissions or their consequences.]

CONTENTS.

Notices— Page

Warning to the Public 879
Rule of Practice 880
Official Circulation 880

Commonwealth—

Applications Received 881
Corrigendum 888
Provisional Specifications Accepted ... 889
Complete Specifications Lodged 890
Applications with Provisional Specifications Lapsed, Abandoned, or Withdrawn ... 891
Applications with Complete Specifications (not open to Public Inspection) Lapsed, Refused, Abandoned, or Withdrawn ... 892

Commonwealth—*continued.* Page

Applications with Complete Specifications (open to Public Inspection) Lapsed, Refused, Abandoned, or Withdrawn ... 892
Specifications open to Public Inspection before Acceptance 893
Complete Specifications Accepted ... 894
Illustrated Notes 895
Commonwealth Specifications 925
Letters Patent Sealed 927
Assignments Registered 929
Renewal Fees Paid 929
Patents Void through Non-payment of Renewal Fees 930

NOTICES.

WARNING TO THE PUBLIC.

The Public are notified that entries in the *Australian Official Journal of Patents* under the headings—

Applications with Provisional Specifications Lapsed.
Applications with Complete Specifications Lapsed.
Applications with Complete Specifications (open to public inspection) Lapsed.
Applications in respect of which Complete Specifications have been Accepted but on which Letters Patent have not been Sealed.
Patents void through non-payment of Renewal Fees.

must not be accepted as final, as under Regulations 7 and 8 of the Patents (Temporary) Regulations 1914 the Minister or the Commissioner may in certain cases defined in the Regulations extend the time prescribed by the *Patents Act* 1903–1909 for doing any act or filing any document.

The Patent Office will furnish, on request accompanied by the prescribed search fee of One Shilling, definite information, so far as possible, as to the position of any particular Application or Patent.

C.10936.

NOTICES—*continued.*

Rule of Practice.

EXAMINATION OF APPLICATION AND SPECIFICATION.

The examination in accordance with Sections 39 and 41 of the *Patents Act* 1903–1909 of an application and specification will not be proceeded with until the application for the patent consists of the following documents:—(1) Form of application; (2) Provisional or Complete Specification with true copy thereof; (3) Drawings (if referred to in the specification) prepared on paper prescribed by the Patents Regulations 1912 with a true copy thereof prepared on paper or tracing cloth; and (4) In the case of an application made in terms of Section 121, (*a*) a copy or copies of the specification or specifications and drawings, or documents corresponding thereto, filed or deposited by the applicant in the Patent Office of the Foreign State or British Possession in respect of the first foreign application, certified in the manner provided by Rules of Practice; and (*b*) If the specification or other document required under (*a*) is in a foreign language, a translation thereof verified in the manner provided by Rules of Practice.

The examination in accordance with Sections 39, 40, and 41 of the Patents Act of a complete specification, lodged in connection with an application for a patent accompanied by a provisional specification, will not be proceeded with until the specification is accompanied by a true copy thereof and drawings (if referred to in the specification) prepared on paper prescribed by the Patents Regulations 1912 with a true copy thereof prepared on paper or tracing cloth.

GEO. TOWNSEND,
Commissioner of Patents.

Official Circulation.

The *Australian Official Journal of Patents* is available for free public inspection at the Trade Marks Sub-offices, at Commonwealth Bank Buildings, Sydney, and at the Customs Houses in Brisbane, Adelaide, Perth, and Hobart on the arrival of the first post after its publication at the Patent Office in Melbourne. Complete files are posted to Government Patent Offices in all parts of the world, and to a large number of Public Libraries and Technical Institutions in the principal cities of Australasia, Great Britain, Europe, America, Africa, and Asia. The *Journal* may also be inspected at the offices of many technical periodicals to which copies are sent in exchange.

COMMONWEALTH.

PROCEEDINGS UNDER THE "PATENTS ACT 1903-1909."

List of Applications for Letters Patent received from 24th to 30th June, 1920.

The abbreviations "Prov." and "Comp." after the numbers indicate respectively that a Provisional or Complete Specification was lodged with the Application.

Thursday, 24th June.

16,219. *Prov.* William Thomas ATTHOW—

"An improved combined letter and envelope."

16,220. Emil HUBER.

[Date applied for under International or Intercolonial Arrangements, 15th May, 1916, being date of application in United States of America.]

"Improvement in carbureters."

16,221. *Prov.* Robert Morse WITHYCOMBE—

"Improved container for dispensing liquids and plastic substances."

16,222. Alben Emmanuel LUNDELL.

[Date applied for under International or Intercolonial Arrangements, 29th Dec., 1916, being date of application in United States of America, No. 139,511/*16*.]

"Telephone exchange systems."

16,223. *Comp.* John Frederick Robert TROEGER—

"Improvements in the art of projecting and displaying pictures."

16,224. Harvey ALLISON.

[Date applied for under International or Intercolonial Arrangements, 18th Mar., 1914, being date of application in United States of America, Serial No. 825,444/*14*.]

"Improvements in toys."

16,225. *Prov.* Herbert Edward Frank NEEDHAM, *assignee*, and Percy PEMBERTON, *act. inv.*—

"An improved machine for planting potatoes, bait and the like."

16,226. *Prov.* Edward WALL—

"Improvements in power driven cross cut saws."

16,227. *Comp.* Vernon Balfour HARLEY-MASON—

"Improvements in steam or like expansion engines."

16,228. *Comp.* W. H. DORMAN & Co. LIMITED, and James HANSON—

"An improved stop cock for high pressure fluid systems."

16,229. *Comp.* W. H. DORMAN & Co., LIMITED, and James HANSON, *act. inv.*—

"Improvements in and connected with fittings for high pressure fluid systems."

16,230. *Prov.* William Clifton HART—

"Improvements relating to apparatus for labelling canned goods."

16,231. *Prov.* John MCGILLIVRAY—

"An improved machine for cleaning and grading seed wheat and other grain."

16,232. *Comp.* William Pagden PERRY—

"Improvement in apparatus for distilling carbonaceous material."

16,233. *Comp.* UNIVERSAL HIGH POWER TELEPHONE COMPANY, *assignee of* Paul Jay HACKETT, *act. inv.*—

"Dispatcher's telephone apparatus."

16,234. *Comp.* James Kinnier FORSHEE—

"Improvements in electrodes."

Applications received, 24th to 30th June—*continued.*

16,235. ELECTROTHERM COMPANY, INC., *assignee of* Charles E. CAMM, *act. inv.*

[Date applied for under International or Intercolonial Arrangements, 20th Mar., 1919, being date of application in United States of America, No. 1,312,830.]

"Electrically heated garment."

16,236. *Comp.* George Garibaldi TURRI, *communicatee of* AUTO ORDNANCE CORPORATION, *assignee of* Theodore H. EICKHOFF and Oscar V. PAYNE, *act. invs.*—

"Improvements in breech closures."

16,237. *Prov.* Cedric Biddulph HENNING—

"Improvements in concrete construction."

16,238. *Comp.* Johan STÖRE—

"Method for the casting of concrete objects and the like below the water level."

16,239. *Comp.* Henry Art KING—

"Improved feed water heating mechanism."

16,240. *Comp.* John George Frederick HIEBER—

"Improved fruit press."

16,241. *Comp.* Carel Joseph Jacob Louis DE VOS—

"Improvements relating to life boats and other boats."

16,242. *Comp.* Charles Lancaster MARSHALL—

"Improvements in and connected with the manufacture of covers for pneumatic tyres."

16,243. *Prov.* Frederick William UREN—

"Improvements in and relating to protective fuses for electric circuits."

16,244. *Prov.* Thomas Waddington STEWART—

"Improvements in wood-worker's benches."

16,245. *Prov.* Thomas OVENDEN—

"Suspender for ladies' hose."

16,246. *Comp.* Thomas Henry GOLDRING—

"Improvements in self-sealing packing cases."

16,247. *Prov.* James Edward MANNING—

"Safety collapsible shipping crate."

16,248. *Prov.* Hugh Victor McKAY—

"Improvements in tractors."

Friday, 25th June.

16,249. Philip Cuthbert Phippen BOOTY.

[Date applied for under International or Intercolonial Arrangements, 11th Jan., 1918, being date of application in United States of America, Serial No. 211,343/*18*.]

"Improvements in and relating to carburetting devices."

16,250. Frederick James PARKS.

[Date applied for under International or Intercolonial Arrangements, 11th Apr., 1917, being date of application in United States of America, No. 1,316,737.]

"Improvements in the manufacture of envelopes."

16,251. *Comp.* Edward DANNER—

"Improvements in method and apparatus for forming sheet glass."

16,252. *Comp.* James MILLER—

"Improvements in and relating to filter presses and the like."

16,253. *Prov.* James McINTOSH—

"Sheep handling device."

16,254. James William JACKSON, *act. inv.*, James Herbert WARREN, and William Dawson WARREN.

[Date applied for under International or Intercolonial Arrangements, 17th Feb., 1919, being date of application in Great Britain, No. 130,556.]

"Improvements in valves or cocks."

16,255. Edmund BUSH and Harry BUSH.

[Date applied for under International or Intercolonial Arrangements, 13th Aug., 1919, being date of application in Great Britain, No. 141,997.]

"Improvements in or relating to machines for drying varnished or gummed sheets of paper and the like."

Applications received, 24th to 30th June—*continued.*

16,256. John George TUFFORD.

[Date applied for under International or Intercolonial Arrangements, 22nd June, 1915, being date of application in United States of America.]

"Improvements in or relating to elastic lifts or heels for boots and shoes."

16,257. *Comp.* INTERNATIONAL EARTH BORING MACHINE CORPORATION, *assignee of* William Edward MOORE, *act. inv.*—

"A method or process of operating augers."

16,258. *Comp.* Stacy Davis TRUMBO—

"Improvements in catamenial bandages."

16,259. *Comp.* Walter Edwin ROBERTSON—

"Improvements in wheels."

16,260. *Comp.* Benjamin ELROD—

"Making printers' leads, slugs and rules."

16,261. James EVERITT.

[Date applied for under International or Intercolonial Arrangements, 7th May, 1914, being date of application in Great Britain, No. 11,270/*14*.]

"Clothes hanging racks or apparatus for use in wardrobes, trunks, warehouses and the like."

16,262. Henry SEIBEL.

[Date applied for under International or Intercolonial Arrangements, 7th May, 1917, being date of application in United States of America, No. 1,288,445.]

"Improvements in pneumatic seats."

16,263. Henry SEIBEL.

[Date applied for under International or Intercolonial Arrangements, 4th Dec., 1917, being date of application in United States of America, No. 1,288,447.]

"Improvements in pneumatic supports,"

16,264. Arthur Graham FRANCE.

[Date applied for under International or Intercolonial Arrangements, 15th Apr., 1916, being date of application in Great Britain, No. 105,600.]

"Improvements in or relating to means for concentrating or intensifying the light of electric filament lamps."

16,265. Sir Hallewell ROGERS and Cecil Montague WALTER, D.Sc.

[Date applied for under International or Intercolonial Arrangements, 12th June, 1918, being date of application in Great Britain, No. 127,985.]

"Improvements in and relating to electrolytic apparatus for the treatment of tinned scrap and tinned articles."

16,266. Percy Frost SMITH and Philip Victor POWELL.

[Date applied for under International or Intercolonial Arrangements, 21st July, 1919, being date of application in Great Britain, No. 18,150/*19*.]

"Improved method of and means for automatic electric control of the electric energy employed upon vehicles with electric transmission."

16,267. *Comp.* William Pagden PERRY—

"Improvements in apparatus for distilling carbonaceous material."

16,268. Arthur John ADAMS.

[Date applied for under International or Intercolonial Arrangements, 21st June, 1919, being date of application in Great Britain, No. 15,688/*19*.]

"Improvements in or relating to trip mechanism for electric ignition devices for internal combustion engines."

16,269. *Prov.* David SHEARER—

"Method of and means for forming or blocking agricultural implement shares by means of rolls."

16,270. *Prov.* David SHEARER—

"Method of and means for drawing and sharpening agricultural implement shares by means of rolls,"

Applications received, 24th to 30th June—*continued.*

16,271. *Comp.* George Garibaldi TURRI, *communicatee of* Simon William FARBER, *act. inv.*—

"Improvements in electric lamp fixtures."

16,272. Joseph William FINNEY.

[Date applied for under International or Intercolonial Arrangements, 19th Nov., 1915, being date of application in Great Britain.]

"Improvements in reciprocating pumps."

16,273. *Comp.* Oscar Fredrik EGEBERG—

"Locking device for rail-spikes, woodscrews and the like."

16,274. *Comp.* W. N. BAINES & COMPANY LIMITED, *assignee,* and John Gillies REID, *act. inv.*—

"Improvements in or relating to packed joints for valve stems and the like."

Saturday, 26th June.

16,275. *Comp.* Alexander Fraser MACKAY—

"A novel form of gearing."

16,276. Wilfrid Wulstan COOK.

[Date applied for under Intercolonial Arrangements, 2nd June, 1920, being date of application in New Zealand, No. 43,863.]

"An improved hat pin."

16,277. *Comp.* LOCOMOTIVE FIREBOX COMPANY, *assignee of* Charles Gilbert HAWLEY, *act. inv.*—

"Improvements in locomotive boilers."

16,278. Lucien Auguste Armand LIAIS.

[Date applied for under International or Intercolonial Arrangements, 20th May, 1919, being date of application in France.]

"Improvements in machines for manufacturing perforated fuel briquettes."

16,279. Lucien Auguste Armand LIAIS.

[Date applied for under International or Intercolonial Arrangements, 20th May, 1919, being date of application in France.]

"Improvements in machines for manufacturing perforated fuel briquettes."

16,280. *Comp.* Frank Walker SMITH, *act. inv.,* and THE ENFIELD CYCLE COMPANY, LIMITED, *assignee*—

"Improvements in or relating to oil pumps for internal combustion engines."

16,281. *Prov.* William WILLIAMS—

"Improvements in lifting jacks."

16,282. *Prov.* William SNEAD—

"Improvements in engine mechanism."

16,283. Albert MARSH.

[Date applied for under International or Intercolonial Arrangements, 13th Nov., 1918, being date of application in Great Britain.]

"Improvements in or relating to ticket delivering, checking and recording machines."

Monday, 28th June.

16,284. *Prov.* Richard Gervase KIRTON—

"Anti-glare reflector for lamps."

16,285. *Prov.* George Frederick HICKS—

"Improved portable power transmitter specially applicable for driving sheep shearing machines and crutching tools."

16,286. Pierre SAMAIN.

[Date applied for under International or Intercolonial Arrangements, 14th Apr., 1919, being date of application in France.]

"Tubular vane and automatically working valves as controlling and safety devices in case of rupture of high pressure water ducts."

16,287. *Comp.* ROSE LITHOGRAPHIC CORPORATION, *assignee of* Benjamin ROSENBERG, *act. inv.*—

"Improvements in receptacles for display of merchandise."

16,288. *Comp.* ROSE LITHOGRAPHIC CORPORATION, *assignee of* Frank M. PEREZ, *act. inv.*—

"Improvements in and relating to boxes or cartons for displaying merchandise."

Applications received, 24th to 30th June—*continued.*

16,289. *Prov.* Percival William Frederick VIGAR—

"Double V clothes horse."

16,290. Augustus William Louis SCHERMULY and Frederick Arthur BULLIVANT.

[Date applied for under International or Intercolonial Arrangements, 5th Nov., 1915, being date of application in Great Britain, No. 15,598/*15*.]

"Improvements in pulleys."

16,291. Alexander FERGUSON.

[Date applied for under International or Intercolonial Arrangements, 28th May, 1919, being date of application in Great Britain, No. 13,500/*19*.]

"Improvements in, and apparatus for, the manufacture of glass."

16,292. Alexander FERGUSON.

[Date applied for under International or Intercolonial Arrangements, 28th May, 1919, being date of application in Great Britain, No. 13,501/*19*.]

"Improvements in apparatus to be employed in the manufacture of hollow articles of glass."

16,293. Alexander FERGUSON.

[Date applied for under International or Intercolonial Arrangements, 25th Sept., 1918, being date of application in Great Britain, No. 130,838.]

"Improvements in apparatus for use in concentrating ores and the like."

16,294. Meredith LEITCH.

[Date applied for under International or Intercolonial Arrangements, 1st Mar., 1917, being date of application in United States of America, Serial No. 151,681/*17*.]

"Improvements in milking machine clusters."

16,295. *Prov.* John Edwin CROWLE—

"Improved joints to forms for reinforced concrete structures and process of construction."

16,296. *Prov.* Henry Alfred TIPPER—

"Bicycle trailer."

16,297. *Prov.* William CONNELL—

"An improved combined potato and seed sower."

16,298. *Comp.* AKTIEBOLAGET LJUNGSTRÖMS ÅNGTURBIN, *assignee of* Fredrik LJUNGSTRÖM, *act. inv.*—

"Arrangement for producing forced draught in locomotive boilers."

16,299. *Comp.* AKTIEBOLAGET LJUNGSTRÖMS ÅNGTURBIN, *assignee of* Fredrik LJUNGSTRÖM, *act. inv.*—

"Improvements in toothed gearings."

16,300. *Prov.* George Herbert ROYCE—

"Improved apparatus for automatically supplying food or water to stock and the like."

16,301. Pierre SAMAIN.

[Date applied for under International or Intercolonial Arrangements, 27th Apr., 1914, being date of application in France, No. 471,408.]

"System of balanced frictionless sluice-valve, adapted to be operated automatically, for water-courses, rivers and the like."

16,302. *Comp.* Harold Edward Sherwin HOLT—

"Improvements in or connected with parachutes."

16,303. *Prov.* Walter Shelley FLAVEL—

"Improvements in shaft couplings and the like."

16,304. *Prov.* Hedley Vicars SPRIGG—

"An improved evaporator for drying copra, fruit or other products."

16,305. SIEMENS BROTHERS DYNAMO WORKS LIMITED and Paul Hermann Hudden JANTZEN.

[Date applied for under International or Intercolonial Arrangements, 11th Apr., 1919, being date of application in Great Britain, Serial No. 9281/*19*.]

"Improvements relating to dynamo electric machines."

Applications received, 24th to 30th June—*continued.*

16,306. L'AIR LIQUIDE, SOCIÉTÉ ANONYME POUR L'ETUDE ET L'EXPLOITATION DES PROCÉDÉS GEORGES CLAUDE.

[Date applied for under International or Intercolonial Arrangements, 24th Dec., 1918 being date of application in France.]

> "Improvements in or relating to apparatus for use in carrying out exothermic chemical reactions under high temperatures and pressures."

16,307. L'AIR LIQUIDE SOCIÉTÉ ANONYME POUR L'ETUDE ET L'EXPLOITATION DES PROCÉDÉS GEORGES CLAUDE.

[Date applied for under International or Intercolonial Arrangements, 18th Dec., 1918, being date of application in France.]

> "Improvements in or relating to the protection of the walls of enclosures in which re-actions take place under high temperatures and pressures."

16,308. Archibald GOUK and Robert NISBET.

[Date applied for under International or Intercolonial Arrangements, 28th Dec., 1914, being date of application in Great Britain, No. 24,651/*14*.]

> "Improvements in lifeboats having collapsible upper structures."

16,309. *Comp.* Christian HEBERLEIN—

> "Improved method of and apparatus for electrolysing a solution of a nickel salt."

16,310. *Comp.* Vincent Michael TIERNEY and George CHAPMAN, *assignees* of Thomas William EDWARDS, *act. inv.*—

> "Improved fitting for securing the framing members of bedsteads in position."

16,311. *Prov.* Harry Edward HARWOOD and Charles Richard WILKINS—

> "An improved method of constructing concrete or reinforced concrete walls, floors, and the like."

16,312. Ralzemónd D. PARKER.

[Date applied for under International or Intercolonial Arrangements, 9th Dec., 1918, being date of application in United States of America, No. 265,922/*18*.]

> "Telegraphic ciphering and deciphering mechanism."

16,313. *Comp.* C. LORENZ AKTIENGESELLSCHAFT, *assignee of* Karl SCHMIDT and Otto SCHELLER, *act. invs.*—

> "Improved method of and means for increasing frequency by aid of static transformers."

16,314. *Comp.* Albert MANVERS—

> "Process and apparatus for tanning."

Tuesday, 29th June.

16,315. *Prov.* Harold Essom NICHOLS and Frank Herbert WELLS—

> "Improvements relating to power transmission belting."

16,316. *Comp.* Edgar Alfred WALKER—

> "An improved linepin."

16,317. *Prov.* Henry Charles Joseph DARRAGH—

> "Overcoming the break of gauge in railways."

16,318. Adolf Ewald GULL.

[Date applied for under International or Intercolonial Arrangements, 4th June, 1919 being date of application in Great Britain, No. 138,536.]

> "Improvements in and connected with centrifugal and turbine pumps and the like."

16,319. Allen A. WILLIAMS.

[Date applied for under International or Intercolonial Arrangements, 10th Apr., 1919, being date of application in United States of America, Serial No. 289,072/*19*.]

> "An improved attachment for operating accelerators of automobiles and the like."

16,320. Edmund VON HERZ.

[Date applied for under International or Intercolonial Arrangements, 22nd June, 1914, being date of application in Austria, No. 31,870/*14*.]

> "Explosive and process of making same."

16,321. *Comp.* Achille ARATO—

> "Improvements in cars for road trains."

Applications received, 24th to 30th June—*continued.*

16,322. *Prov.* Isaac Horace Hill—

"Improvements in pneumatic wheels."

16,323. Thomas Walter Barber.

[Date applied for under International or Intercolonial Arrangements, 2nd Dec., 1918, being date of application in Great Britain, No. 132,947.]

"Improvements in effecting the recovery, or separation, of colloidal matter from liquids."

16,324. *Comp.* Henry Albert Symes and Vincent Gabriel Symes—

"Improved collapsible wire-runner."

16,325. Charles Harold Waithman.

[Date applied for under International or Intercolonial Arrangements, 19th Oct., 1914, being date of application in Great Britain, No. 21,196/*14*.]

"Improvements in or relating to advertisement devices."

16,326. *Prov.* John Murdo Macdonald—

"Improvements in conduit fittings."

Wednesday, 30th June.

16,327. Clayton Howard Wright and James Edward Reynolds.

[Date applied for under International or Intercolonial Arrangements, 7th June, 1919, being date of application in Great Britain, No. 14,492/*19*.]

"Improvements in horns for use on road vehicles and like purposes."

16,328. Samuel Walton and William Leather.

[Date applied for under International or Intercolonial Arrangements, 10th June, 1918, being date of application in Great Britain, No. 126,509/*18*.]

"Improvements in and relating to exhaust silencers for internal combustion engines."

16,329. *Prov.* Charles Edward Webster—

"Improved road grip or brake for automobiles."

16,330. *Prov.* Bertie Philip Skillicorn—

"Improved washing machine for washing wool, cottonwaste. raw cotton, rags and flocks."

16,331. *Prov.* Thomas Gardiner Hutchinson—

"An improved fitting for joining up electrical conduits."

16,332. *Comp.* Eric Guy Terraneau—

"Improvements in neck collars."

16,333. Archibald Gouk and Robert Nisbet.

[Date applied for under International or Intercolonial Arrangements, 17th Aug., 1915, being date of application in Great Britain, No. 11,876/*15*.]

"Improvements in collapsible upper structures for life-boats."

16,334. Frederick Cressall.

[Date applied for under International or Intercolonial Arrangements, 31st Mar., 1919, being date of application in Great Britain, No. 8056/*19*.]

"An improved burglar or thief alarm."

16,335. John Drury and Frank James Gray.

[Date applied for under International or Intercolonial Arrangements, 20th Aug., 1913, being date of application in Great Britain, No. 18,909.]

'Improvements in speed-changing mechanism."

16,336. *Prov.* Alexander Mair—

"Improvements in end-thrust bumper devices for motor-cars and like vehicles."

16,337. *Prov.* Archibald Irvine Hosie and James Griffith Evans, *act. invs.*, and William John Walsh, *assignee*—

"An improved expanding and self-centering mandrel."

16,338. *Prov.* Gawler Percy Thick—

"Improvements relating to the screw of an extension table."

Applications received, 24th to 30th June—*continued.*

16,339. *Prov.* George DONALDSON—

" Improvements in and relating to rolling stock wheels for change of gauge purposes."

16,340. *Prov.* William George GASTON—

" Improvements in and relating to roller bearings."

16,341. *Prov.* Isaac Horace HILL—

" Improvements in roofing tiles."

16,342. *Prov.* Cecil Napier ROSS—

" Improved variable speed gear for use on motor vehicles and for other purposes."

16,343. *Prov.* Thomas GORDON—

" Improvements in chassis of motor cycle side cars."

16,344. *Prov.* Robert MCFARLANE—

" Interlocking split washer."

16,345. *Prov.* William Henry BAUERT—

" Signal means for automobiles for indicating their direction of route or stoppage."

16,346. *Prov.* William Henry BAUERT—

" Improvements relating to the mounting of head light lamps of automobiles."

16,347. *Comp.* John Charles DAVIES—

" Improvements in suction gas producers."

16,348. *Prov.* Henry James HOPKINS, *act. inv.*, and SCOTT & HOLLADAY LIMITED, *assignee*—

" Improvements in and relating to electric conduit jointings."

16,349. *Prov.* John Harrison HEILY—

" Improvements in horse and cattle drenchers."

16,350. John William STEVENSON.

[Date applied for under International or Intercolonial Arrangements, 22nd Oct., 1917, being date of application in Great Britain, No. 120,078.]

" Apparatus for spraying or atomizing liquids or fluids and heating, cooling or mixing the same."

Corrigendum.

1920.

In Vol. 32, No. 21, page 707, under heading " Applications Received," *for* 15,862. *Prov.* Jesse Arthur DUPREE, &c., *read*—

15,862. Jesse Arthur DUPREE.

[Application under Intercolonial Arrangements.]

" Improved collapsible wood trellis frame bathing screen and tent, or improved system for construction of tents and temporary buildings."

Provisional Specifications Accepted.

Names in parentheses indicate actual inventors, &c., who are not applicants. Italics indicate that some amendment has been made.

1920.

14,106. Summers, M. E. Alarm switch.
14,316. Rawolle, G. B. Seed and fertilizer attachment to disk cultivator.
14,561. Glynn, D. F. Advertising.
14,742. Nelson, R. C. Tin opener.
14,915. Eastman, H. Automatic fire extinguishing sprinkler and alarm.
15,121. Habel, R. P., & Kelly, W. J. L.
15,222. Kotzebue, N. *Improvements in and relating to pole levers for raising trees and stumps thereof.*
15,401. Munro, A.C. Cooling milk.
15,476. Ebsworth, R. H., Battery testing.
15,495. McInerney, T. Roller guard.
15,522. McConnell, W. J., & Kingstone, G. Broom.
15,669. Hoarse, H. W. Engine stand.
15,679. Croaker, S. P. Combustion engine.
15,686. Hankin, H. W. J. Storage battery.
15,687. Hankin, H. W. J. Current rectifier.
15,700. Williams, C. A. & F. A. Measuring liquid.
15,701. Ramsay, W. (Taylor, A.) Sprayer.
15,720. Bailey, G. J. Shock absorber.
15,722. Trewhella, W. Combustion engine.
15,733. Strangward, F. E., & Brookes, H. R. Combustion engine.
15,740. Geere, A. E. Aeroplane.
15,741. Geere, A. E. Combustion engine.
15,752. Struth, H. A. B., & Richardson, E. J. Lift valve.
15,758. Pratt, W. C. Rail bed.
15,762. Mass, R. P. Educational apparatus.
15,763. Tomkins, A. W. Coil winding.
15,769. Morris, M. Suspender.
15,774. Bassett, J. Puzzle game.
15.775. Buchner, L. B., & Reilly, J. L. Clothes hanger.
15,777. Andrews, H. Metal recovery.
15,783. McKenzie, A. J. Sulphate and oxide production.
15,806. Cobb, C. Preserving food.
15,808. Sutherland, J. D. Furniture polish.
15,810. New, G. A. Vehicle seat.
15,812. Newman, W. R. Wind motor gear.
15,813. Mitchell, A. Harvesting root crops.
15,814. Parker, E. H. Cold storage.
15,820. Ebsworth, R. H. Electric battery.
15,829. The York Electric Works Ltd. (Slingsby, F.). Electric wall shoe.
15,833. Whiting, S. Cycle wheel suspension.
15,835. Ebsworth, R. H. Hot water bag.
15,836. Huckson, H. J. Metal patch.
15,841. Booth, E. B. Railway vehicle.
15,843. Newton, J. W. Castings for shaping and drying stockings.
15,849. Campbell, J. McM. Boiler furnace.
15,894. Bourne, R. E., & Torrance, W. Trousers press.

Complete Specifications lodged after Provisional Specifications.

Complete Specifications under Section 63A have their Cognate Provisionals indicated in brackets. The date following the title is that on which the Complete Specification was lodged.

1918.

8528. Emil Johan JOHANSSON—

"An improved jig or tool for use in lining with bearing metal (or babbitting) the big ends of connecting rods of motor engines." 3rd July, 1919.

1919.

12,218. John Blackwell CROWTHER—

"Improvements to earth closets and the like." 24th May, 1920.

12,258. [16,140/*20*.] John Bourke SALMON, *act. inv.*, and Richard Griffen WALSH, *assignee*—

"An improved composition substance particularly adapted for forming shaped articles such as boot heels and soles, cricket balls and the like and method of manufacturing same." 23rd June, 1920.

12,295. Andrew DAHL—

"Improvements in pile driving apparatus." 28th June, 1920.

12,345. Cecil Herbert FERGUSON—

"Improved mode of and apparatus for making concrete pipes and other analogous articles." 22nd June, 1920.

12,499. [13,782.] Leslie William FERRES—

"Improved method of and means for securing and spacing cards or leaves in loose card or loose leaf ledgers and the like devices." 23rd June, 1920.

12,618. Arthur Joseph BROWN, *act. inv.*, and Edward WARD, *assignee*—

"Apparatus for discharging grabs at any required elevation." 24th June, 1920.

12,624. Richard Joye Benjamin BAKER—

"Improved burglar alarm." 24th June, 1920.

12,637. John MORGAN, trading as THE CONCRETE BUILDING COMPANY—

"Improvements in and connected with concrete or like building blocks or slabs." 23rd June, 1920.

12,649. Joseph AHEARNE—

"A portable incinerator and night soil pan cleaner." 26th June, 1920.

12,668. Percival Henry Ernest TALBOT—

"Improvements in the spring tensioning devices of stump-jump ploughs and like cultivating implements." 28th June, 1920.

12,669. JAMES MARTIN AND COMPANY LIMITED, *assignee of* John Francis McNEILL, *act. inv.*—

"Improvements in reversible disc ploughs." 28th June, 1920.

12,671. Ernest Jorgensen HOBERG—

"An improved breeching." 25th June, 1920.

12,838. James Edward DERRIN—

"Improved stop for window sashes." 25th June, 1920.

12,993. John PATON—

"An improved folding table, combined with ironing board and clothes rails." 28th June, 1920.

13,150. THE AUSTRALIAN WOOD PIPE COMPANY LIMITED, *assignee of* Rupert Mason CANNING, *act. inv.*—

"Improved band for wood stave pipes and the like." 28th June, 1920.

Complete Specifications lodged after Provisional Specifications—*continued.*

1919.

13,197. Frederick EDWARDS—
"Connector for connecting a conductor to another conductor, tubing, piping, or the like." 26th June, 1920.

1920.

14,029. Charles Westmore ELLIS, trading as COOKE BROS.—
"An improved boot heel support." 17th June, 1920.

14,487. Albert Arthur TERRETT—
"An improved last and stand for hand sewn pump boot repairers." 22nd June, 1920.

14,819. Mary Catherine BUDGE—
"Rheumatic specific." 25th June, 1920.

Applications with Provisional Specifications Lapsed, Abandoned, or Withdrawn.

Names in parentheses indicate actual inventors, &c., who are not applicants.

1918.

Lapsed.

9389. Sharp, J.

1919.

12,219. Walsh, W. H.
12,221. Lipscombe, W. (Booty, P. C.)
12,222. Heywood, F. W., & Diwell, W. H.
12,231. Hunting, A. J. (Hunting, Ethel M.)
12,234. Scott, F.
12,235. Simpson, R.
12,238. Christiansen, M. B.
12,242. O'Brien, J. R.
12,243. Munson, R. D.
12,245. Townsend, H. V.
12,246. Rickerby, A. W.
12,248. Gebbie, J. N., & Walpole, J.
12,251. Warren, J. T., & Thompson, C.
12,256. Haines, W. C.
12,257. Bartlett, J.
12,259. Salmon, J. B., & Walsh, R. G.
12,260. Richards, F. C.
12,261. Walsh, T.
12,262. Alexander Ley & Son (Ley, L. A., & N. L.)
12,263. Herrmann, M. E.
12,270. Graeme-Smale, Effie
12,272. Lamb, R. G., & Breakwell, S.
12,273. Kindermann, G. J.
12,276. Chapman, K. B.
12,280. Armstrong, D. C.
12,281. Adams, E. C.
12,287. Liggins, Clara S.
12,288. Wild, R.
12,290. Rankin, A. D.
12,291. Bowell, J. L.
12,292. Sargeant, T.
12,293. Ryan, E. F.
12,297. McAvoy, J. E.
12,300. Ferry, P. J.
12,301. Latham, D.
12,304. Barker, F. G.
12,306. Obbinson, T. P.

Applications with Complete Specifications (not open to Public Inspection) Lapsed, Refused, Abandoned, or Withdrawn.

Complete Specifications under Section 63A have their Cognate Provisionals indicated in brackets. Names in parentheses indicate actual inventors, &c., who are not applicants.

1919.

Lapsed.

10,512. Wilson, W. J., & Markham, F. A.
10,514. Roberts, W. L. H.
10,588. Sykes, G.

1920.

Withdrawn.

14,331. Stevens, H. C. F.

Applications with Complete Specifications (open to Public Inspection) Lapsed, Refused, Abandoned, or Withdrawn.

Complete Specifications under Section 63A have their Cognate Provisionals indicated in brackets. Names in parentheses indicate actual inventors, &c., who are not applicants.

1919.

Lapsed.

10,540. Ryan, C.

Specifications open to Public Inspection before Acceptance,

UNDER SECS. 121 AND 122, "PATENTS ACT 1903-1909."

The specifications may be inspected at the Patent Office, Melbourne, on payment of the search fee of One Shilling in respect of each Application.

Typed copies of specifications will be supplied at Sixpence per 100 words (minimum charge, One Shilling).

Sun prints of drawings will be supplied at One Shilling per foolscap folio sheet (8 inches x 13 inches).

Fees must be tendered in cash or postal note or in money order, payable to the Commissioner of Patents, Melbourne.

1920.

15,821. Joseph GOULDBOURN, Harry Hardy JACKSON, and THE BRITISH UNITED SHOE MACHINERY COMPANY LIMITED.

[Date applied for under International or Intercolonial Arrangements, 27th June, 1919, being date of application in Great Britain, No. 16,215/*19*; open to public inspection, 28th June, 1920.

"Improvements in or relating to buttonhole sewing machines."

15,875. Fred Sumner CARR.

[Date applied for under International or Intercolonial Arrangements, 27th June, 1919, being date of application in United States of America, Serial No. 307,111/*19*; open to public inspection 28th June, 1920.]

"Improvements in or relating to separable fasteners."

15,995. Earl Bernard PHELPS, Albert Fletcher STEVENSON, and John Clark BAKER.

[Date applied for under International or Intercolonial Arrangements, 26th June, 1919, being date of application in United States of America, Serial No. 306,808/*19*; open to public inspection 28th June, 1920.]

"Improvements in manufacture of butter fats."

16,170. Adolf HIRSHFELD.

]Date applied for under International or Intercolonial Arrangements, 21st June, 1919, being date of application in United States of America; open to public inspection, 22nd June, 1920.]

"Improvements in or relating to embroidering machines."

16,172. Eva Louisa Dulcie Bagg BALFOUR and John William Blackburn BALFOUR.

[Date applied for under International or Intercolonial Arrangements, 19th June, 1919, being date of application in Great Britain, No. 136,479; open to public inspection 21st June, 1920.]

"Improvements in or relating to spikes."

Complete Specifications Accepted.

OPEN TO PUBLIC INSPECTION AT THE PATENT OFFICE, MELBOURNE.

SEARCH OR INSPECTION FEE—ONE SHILLING EACH.

Notice is hereby given that all persons interested in opposing the grant of a Patent on any one of the following applications, may at any time within three months from the date of this Journal, or within such further time not exceeding one month as may on application made within such three months be allowed, give notice at the Patent Office, in Form G, which must be accompanied by the fee of £2, tendered in cash or postal note or in money order.

Within fourteen days after the lodging of the notice of opposition, or within such further time as the Commissioner allows, the opponent shall leave at the Patent Office declarations and copies thereof in support of his opposition, and forthwith after the receipt thereof the copies shall be transmitted by the Commissioner to the applicant.

Failure by an opponent to lodge declarations shall be deemed intentional abandonment of the opposition.

1919.

9876. Cleghorn. Coating substance.
10,537. The National Cash Register Co. (Fuller). Registering and recording machine.
10,655. Smith. Furnace retort.
10,895. Western Electric Co. Ltd. (Reynolds). Automatic telephone switch.
11,193. Rowlands. *Improvements in vaporizers for internal combustion engines.*
11,346. Dykes. Pneumatic tyre casing.
11,372. Matheson. Hose coupling.
11,393. Baxter. *An improved form of roller fastener for boots, shoes, corsets and the like.*
11,394. Julius. Totalizator.
11,482. Vines & Marsden. Indicating apparatus.
11,524. Brooks. Chlorhydrins.
11,540. Holyer. Tyre changing tool for split rims.
11,560. Warner & Palmertz. *Improvements in automatic advertising apparatus.*
11,565. McNeilage (Cunningham.) Oil fuel burner.
11,580. Yeates. Gate hinge.
11,587. Rintoul, Nolan, & Nobel's Explosive Co. Ltd. Nitroglycerin explosives.
11,597. Carroll & Leighton. Building composition.
11,624. Ritchie. Axle-box.
11,718. Fredriksson. Mechanical shovel.
11,830. Witham. Wind screen
11,920. Walsh (Electro-Industrie E. G., *assignee of Ferdinand Paul Baumann, act. inv.*). Dry cell.
12,053. Hendley (Bramson, Hanson, & Caldwell, *act. invs.*). Joint for flexible pipe lines.
12,062. Vincent. *Improvements in grease plugs for bearings or the like.*
12,063. Vincent. *Improvements in drainage valves for engine cylinders.*
12,186. Sloan & Sloan. Water wheel.
12,370. White & Wall. Internal combustion engine.
12,436. Phillips (Taylor-Wharton Iron & Steel Co.—Johnson.) *Improvements in tractors of the track-laying type.*
12,720. Western Electric Co. Ltd. (Demarest.) Electrical signalling system.
12,766. Moor. Aeroplane level-indicator.
12,767. Blacksher. *An improved aeroplane stabilizing means.*
12,869. Lowndes. Life-saving device.
12,878. Ellis & Hands. Valve spring retaining collar.
12,889. Hindle, Savage, Liddle, & Dabbs. Roller bearing.
13,018. Heffernan. Attachment for liquid container.
13,038. Pickering. Jointing clip.
13,065. Hosack. Ingot casting.
13,123. Henderson. Mould box.
13,179. Stokes & Smith Co. (Morrison). Coating paper.
13,225. Whaley. Internal combustion engine.
13,268. Hanson. Radio telephony.
13,279. Van Oordt. Metal hardening.
13,312. Witter. Manufacturing metallic shapes.
13,323. Morony & Garling. Animal trap.
13,350. Kennedy. Agitator for liquids.

Complete Specifications Accepted—*continued.*

1919.

13,443. Higgins & Gunn. Stabilizing ejectors.
13,487. Reid. Waggon tipping.
13,543. Corning Glass Works (Gage & Churchill). Picture projection.
13,548. Stark (Flammang). Piston.
13,549. Stark (Flammang). Piston manufacture.
13,551. Stark (Flammang). Piston.
13,552. Stark (Flammang). Piston.
13,553. Stark (Flammang). Piston.
13,554. Stark (Flammang). Piston.
13,555. Tevander. *Improved bottle closure applying machine.*
13,557. Hachmann. Piston ring.
13,558. Hachmann. Journal bearing.
13,575. Regan (*assignee of* A. G. Shaver, *act. inv.*). Air brake valve.
13,577. Regan (*assignee of* A. G. Shaver, *act. inv.*). Brake pipe valve.
13,581. Tucker & Tucker. Carburettor.
13,601. Aktiebolaget Bofers (Weibull). Set-screw.
13,610. Barnes, Fraser, & Shaw. Pump.
13,809. Turri (Hume). Furnace front.

1920.

13,885. Glendale. Alimentary substance.
13,966. Corning Glass Works (Bailey). Heat treatment of articles.
14,013. Automatic Electric Co. (Erickson). Electro-magnetic relay.
14,248. Conde. Race game.
14,281. Crosby & Price. Vapour heater valve.
14,694. Bennett & Kirsten. Loose-leaf binder.
14,727. Johnson. Fish trap.
14,959. Scott. Scissors sharpener.

NOTE.—THE SURNAMES IN PARENTHESES INDICATE ACTUAL INVENTORS (OR OTHER INTERESTED PARTIES) WHO ARE NOT APPLICANTS. ITALICS INDICATE THAT SOME AMENDMENT HAS BEEN MADE.

Further information of the inventions in the above Specifications is given in the following Illustrated Notes, and the full particulars of names, addresses, and occupation or calling of persons concerned in each application are stated in the Printed Specifications.

Printed copies of the above Specifications may now be ordered from the Government Printer, Melbourne, price One Shilling each, post free for cash or postal note ; the copies will be posted from Melbourne two weeks after the date of this Journal, when copies will also be forwarded to the Trade Marks Sub-offices, at the Commonwealth Bank Buildings, Sydney, and at the Customs Houses, Brisbane, Adelaide, Perth, and Hobart, for sale on demand.

A list of Australian and Foreign Offices and Libraries at which the Printed Specifications are placed for free public inspection is given in the first Journal of each quarter.

◆

Illustrated Notes

TO THE FOREGOING ACCEPTED COMPLETE SPECIFICATIONS.

The class numbers refer to similar inventions comprised in the Classified Subject Matter Indexes.

1919.

9876. 21 Jan. C. A. CLEGHORN, Eng.

Date applied for under International or Intercolonial Arrangements, 5th Feb., 1918, Great Britain, No. 2105/*18*.

Class 79.3.

Coating Substance.

To enable Turkish birdlime to be brought to a condition in which it may be easily applied to materials to render them fluid-proof, it is heated to about 180° F., and alcohol gradually mixed therewith.

A solution of borax may be added prior to the addition of the alcohol, diatomaceous earth or shellac or both or dextrine being added to vary the consistency.

No drawing, 4 claims.

Illustrated Notes—*continued.*

10,537. 26 Mar. The National Cash Register Company, *assignee of* Frederick Lincoln Fuller, *act. inv.*, Connecticut, United States of America.

Class 55.5.

Registering and Recording Machine.

A cash register suitable for savings bank operations in which means are provided for printing depositor's numbers, and the amounts withdrawn or deposited on customers' books and cards, and at the same time on a record slip, and also for totalling or sub-totalling transactions.

The keyboard is provided with banks of keys **73** which are mounted on frames **79** carried on cross-rods **80**, and co-operate with key detents **81** and locking plates **82** to operate the totalizators and the printing mechanism. The totalizators consist of a plurality of pairs of pinions **200** mounted in frames carrying rollers engaging a shaft **215** which is rocked to bring the selected totalizator into engagement with the actuating rack **198**.

The type, which is carried on a plurality of gear like type carriers **288**, prints on to the depositor's card and book which is carried in the recesses **475** of a carriage; similar type carriers **285** print on the record slip **433**. One bank of keys **73** is provided for setting up the type carriers for printing depositor's numbers and another for setting up the amounts, and two transaction keys aline the type to the correct column for withdrawal or deposit transactions and operate the machine to print on the book, card and record slip, and at the same time to add the transaction on the totalizator.

A total or sub-total is printed by operating a total control lever, the totalizator selected being in engagement with the actuating rack **198**, which is rocked upwards by the main driving shaft **65**, and actuates the type carriers for printing.

Means are provided for preventing the contact of the impression device with the type carriers when no record material is present in the machine, and for preventing operation of the machine when the record strip is exhausted. Mechanism is also provided for zero eliminating, and dating.

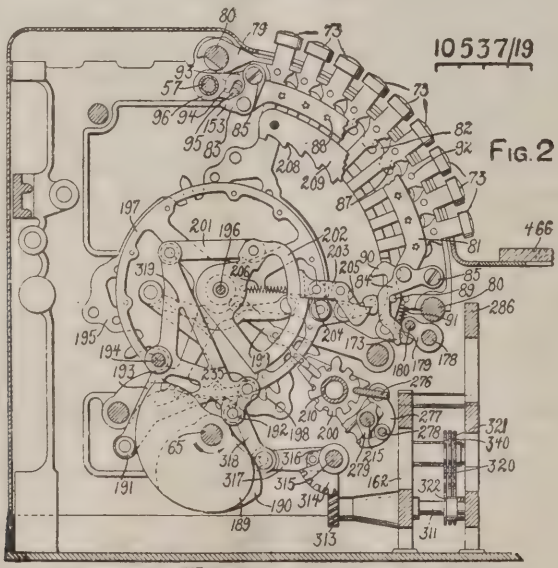


FIG. 2

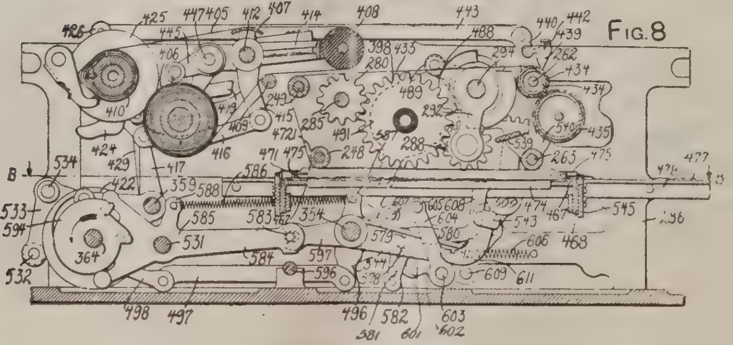


FIG. 8

37 figures, 45 claims.

Illustrated Notes—*continued.*

10,655. 2 Apr. C. H. Smith, New Jersey, United States of America.

Date applied for under International or Intercolonial Arrangements, 3rd Apr., 1918, United States of America, Serial No. 226,410/*18*.

Class 16.2.

Furnace Retort.

A furnace for carbonizing briquettes, made from raw coal or partially carbonized coal, admixed with a binding material, such as pitch, in which the retort portion 6 comprises three parallel sets of carbonizing chambers **6x**, sloping downwardly from the charging end to the discharging end, each being subdivided by partitions **6a** into compartments **6b**, located vertically above one another. Combustion flues **18ay**, **18ax**, arranged in vertical tiers, are formed between the longitudinally extending vertical walls of the chambers **6x**. To utilize heat from the waste gases the lower portion **7** of the furnace comprises sets of sinuous passages **20a—20l**, for the spent gases, divided by vertical longitudinally extending walls **21** from passages **22a—22k**, through which the incoming air is passed after entering the furnace through ports **22**.

10655/19

FIG. 2

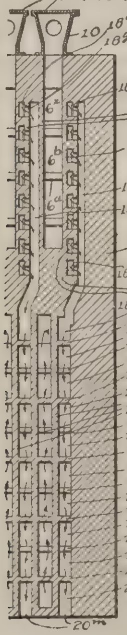
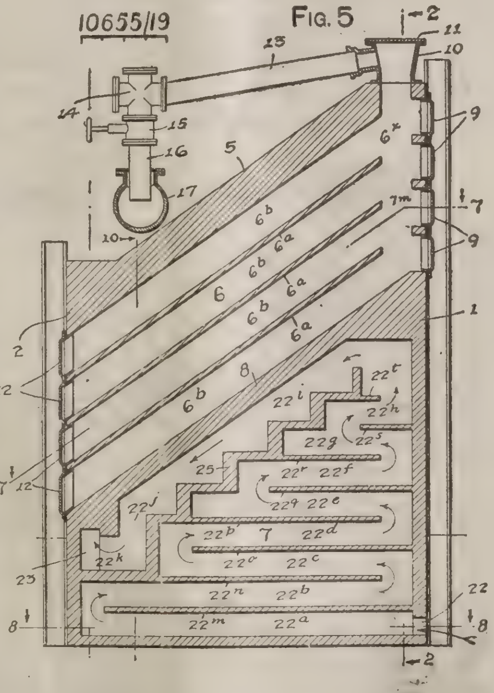


FIG. 5



11 figures, 11 claims.

Illustrated Notes—*continued.*

10,895. 1 May. Western Electric Company Limited, *assignee of* J. N. Reynolds, *act. inv.*, Connecticut, United States of America.

Class 05.7.

Automatic Telephone Switch.

A selector switch in which the capacity of the switch is materially increased by the provision on the switch of a set of movable terminals for each section of the fixed terminal bank, the selection of a section being effected by the selection of the corresponding set of movable terminals.

Each set of movable terminals **2** is mounted upon a carriage **3** arranged to slide in a guide **37** spaced along the hollow shaft **4** within which operates a shaft **17** which carries the latching members **32** in slots **31** longitudinally and circumferentially spaced.

Secured to a sleeve slidably mounted upon the lower end of the shaft **17** and adapted to be locked by a pawl **25**, is a ratchet wheel **19** driven by a pawl **22** carried by the armature of the rotary magnet. A release bar **29** depending from a collar **30** carried by the shaft **4** is adapted to strike a shoulder **28** on the pawl **25** on the downward release movement of the shaft **4** and withdraw the pawl **25** from engagement with the ratchet **19**.

On the rotation of the shaft **17** by the rotary magnet one of the slots **31** will be brought into alinement with one of the slots **39** carried by the shaft **4**. The corresponding latch member **32** will be released. Shafts **4** and **17** are then stepped upwards by the vertical magnet until the selected level is reached, when the locking member **16** will be actuated and the shaft **4** released from the shaft **17** which continues its upward movement. The hooked lower end of the latch **32** will now engage the lower end of lever **40** and cause the terminals **2** to be moved to and over the group of fixed terminals with which it is alined.

10895/19

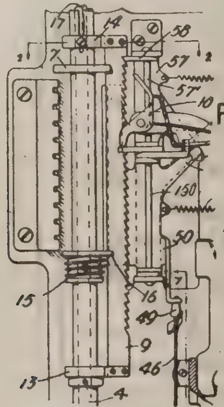
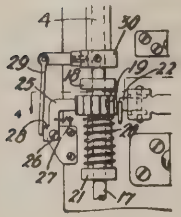


FIG 1



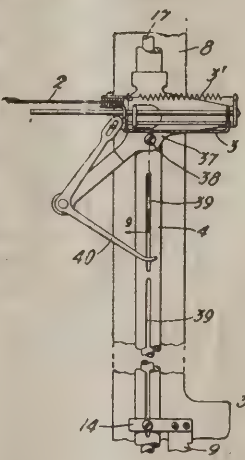


FIG. 5

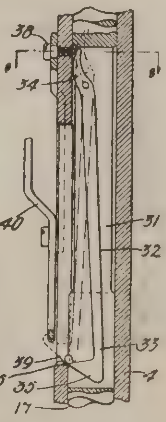


FIG. 9

10 figures, 13 claims.

Illustrated Notes—*continued.*

11,193. 22 May. P. O. ROWLANDS, Eng.

Class 66.5.

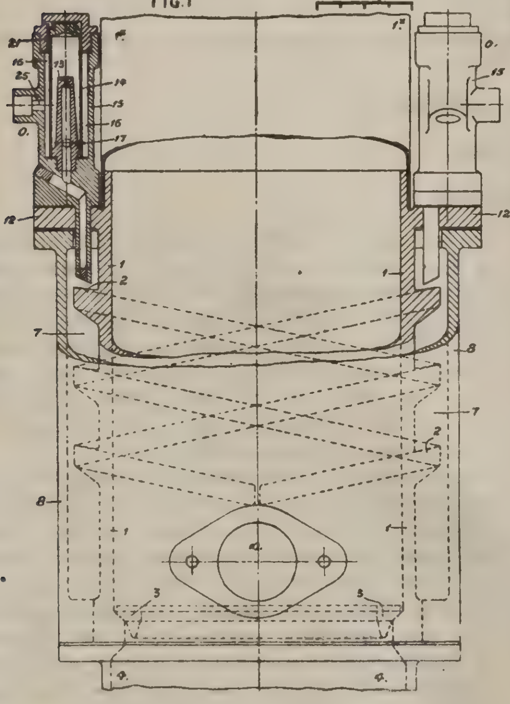
Vaporizer.

An oil fuel vaporizing apparatus in which oil trickles from a plurality of feeding devices, having overflow means by which a constant liquid level is maintained, on to an inclined internally heated surface under the action of the suction of the engine.

The grooves **2** into which the oil falls are placed around the chamber **1** and are heated by slow combustion of fuel within the chamber. The oil is pumped into the space **16** of the feed device, passes through the holes **17**, and overflows into the nozzle **13**. An outlet for excess fuel is maintained by an overflow weir **20** which stands slightly above the upper end of the induction nozzle **13**. A priming inlet and air regulating means are provided.

The oil may alternatively be fed to rods having roughened surfaces, or to the outer wall surfaces of the heater.

FIG. I 11193/19



4 figures, 8 claims.

11,346. 2 June. J. L. G. DYKES, Illinois, United States of America.

Classes 97.83; 70.8; 47.5.

Pneumatic Tyre Casing.

To produce a casing stretched sufficiently to avoid further stretching when in actual use, the layers comprising the casing are laid together flat upon each other and the tread portion then stretched to the desired circumference after which the edges are brought together and the casing vulcanized.

The casing is built up on a rotary drum **1** and comprises layers **3—6**, a layer **7** of raw gum on which is laid a narrow fabric breaker strip **8**, and a tread layer **10** of raw gum. Strips of non-stretching material **11**, **12** are built into the edges of the casing to form beads, the edges of the layers being wrapped around the strips to hold them in place. The casing thus formed is then placed on the stretching apparatus comprising a table **18** provided with apertures **17**, **19** accommodating long and short push rods **15**, **16** actuated by cams **21**, **22**, and co-operating with removably mounted long and short stretching sections **13**, **14** adapted to bear against the inner surface of the casing. The casing and core are then placed in a vulcanizing mould and the two beaded edges brought together.

11346/19

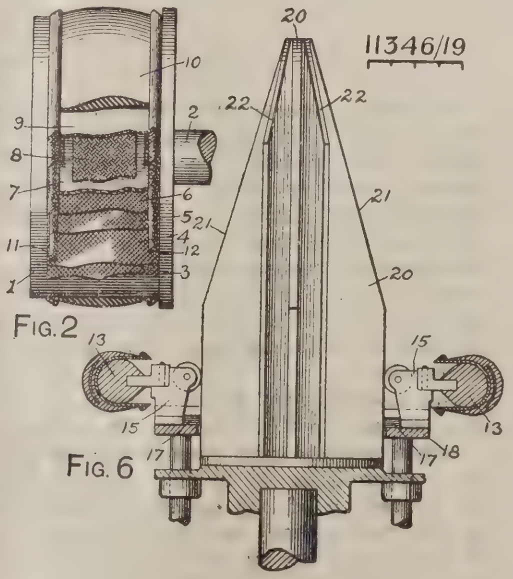


FIG. 2

FIG. 6

11 figures, 5 claims.

Illustrated Notes—*continued.*

11,372. 4 June. D. D. Matheson, Vic.

Class 74.5.

Hose Coupling.

To secure a garden hose **C** to a tap **A**, a bow **2** with spring coil **4** is pivoted to a lever **9** having a link **11** attached to the coupling **B**. A loop **15** is provided for connecting to the lug **14** when used with smaller taps.

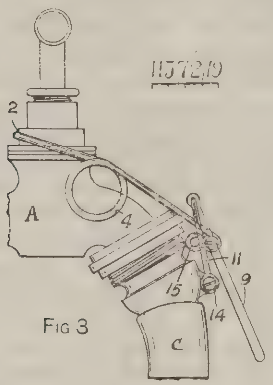


Fig 3

3 figures, 3 claims.

11,393. 6 June. J. A. Baxter, New South Wales.

Classes 44.2; 43.9.

Boot or Corset Fastener.

To enable laces to run freely through the fasteners of boots, corsets and the like, the fasteners are fitted with rollers **11** journaled on pins **13** which are riveted to the top and bottom plates **8** and **9**.

The plates are connected together by side strips **10**, and the bottom plate is attached to an eyelet **14** which can be expanded and clinched to secure the fastener to the flap of a boot.

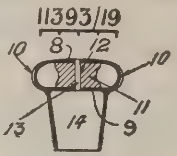


Fig.3

7 figures, 3 claims.

11,394. 6 June. G. A. Julius, New South Wales.

Class 53.3.

Totalizator.

An electro-mechanically operated totalizator in which the selective rotation of a selector arm controls the movement of a printing wheel to bring the faces thereof into printing position, while the depression of the arm operates to feed a paper strip between the printing wheel surface and the platen, to ink the wheel surface and cut off ticket lengths from the strip, and to eject the tickets after printing into the ticket receptacle.

The selector arm **67** is formed with a plunger spindle **72**, a spring **73** holding in a raised position the selector pin **74** above the tracker holes **76** in the dial sector **75**. On depression of the selector pin into the desired tracker hole, the control switch arm **78** is brought up by the spring **142** to engage the contact blade **32** with line contact **79** corresponding with the selected hole, the current passing from the holding switch in the apparatus through the lines **33** and **34** to the switch blade **141** and terminal post **143** of the magnet coil **165**, thence along the line **27** to the contact post **28** related to the particular printing machine, thereby completing momentarily a circuit through the lines **30**, **31**, through the grand total indicator **23**, generator **20**, and the appropriate horse indicator **21**—**22**.

On rotation of the selector arm carried on the sleeve **70** the sector wheel **81** mounted thereon meshes with a wheel on the printing wheel shaft to bring the desired printing face into register with the platen, a tapered dowel pin locking in printing position the printing surface of the wheel. From the lower end of the paper guide the ticket length is fed between the printing roller and the platen roller, and after being printed passes under the guillotine knife. Prior to the operation of the guillotine

[*Continued next page.*

Illustrated Notes—*continued.*

knife the printed length of paper is moved forward into the cradle **58** formed on the carriage **62** where it is held by spring-supported rollers **174** so that its underface may be met by the type face on the printing wheel. The carriage **62** is mounted by a wrist-pin **63** on the end of an oscillating carrier arm **64** mounted on a rocker spindle so that, when a runner carried on the end of an actuating arm fixed to the rocker spindle junctions in a grooved cam on the shaft **91**, the carriage moves downward to bring the cut off ticket into contact with the printing face of the printing wheel, such movement also setting the ejecting means mounted on the carriage. During this downward movement of the carriage an offset roller **182** contacts with the striker arm **181** forcing it up, the spring **184** supporting the pull arm **201**, thus lifting the spindle **183** and bringing up the sector arms and ejector **66** clear of the cradle **58**, permitting the ejectors to move backward without disturbing the paper in the cradle. A notch in the trigger **185** now engages a catch pin, and as the carriage rises the contact **182** leaves the arm **181**, the arms **66** being now held back by the trigger. The arms **66** are now forced downwards until the serrated edges grip the ticket **198**. The catch pin is now pushed free from the notch in the trigger **185** permitting the spring **184** to apply a quick forward movement to the ejectors and to pass the ticket into the ticket trap, into a compartment determined by the disposition of the tongue **147** the position of which is governed by the actuation of the shaft **150** controlled by the switch blade **141**, when the selector arm is plunged and circuit completed through the magnet **165**.

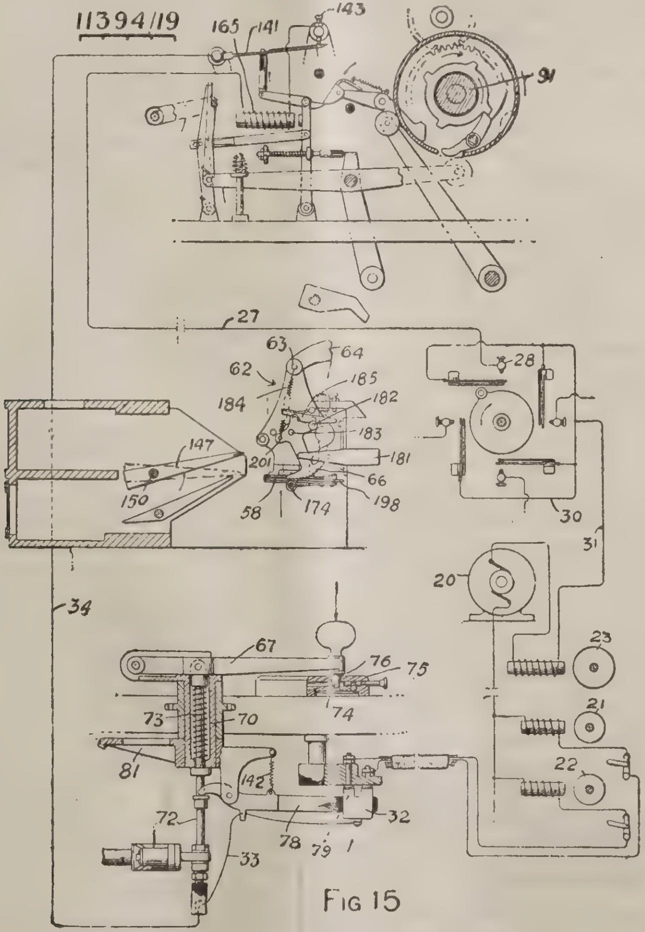


Fig 15

15 figures, 14 claims.

Illustrated Notes—*continued.*

11,482. 16 June. J. C. VINES and P. A. MARSDEN, New South Wales.

Class 56.6.

Indicating Apparatus.

To indicate the variation in certain physical conditions at a location remote from their occurrence, the moving element of the local registering instrument is earthed and makes moving contact with a resistance element which constitutes part of each of the circuits of the coils of a differential astatic galvanometric instrument in which the coils are so disposed that their planes intersect at about 30°.

In Fig. 5, which is an application for the indication of variation in pressure, the local instrument is a pressure gauge of known type and the pointer 21, which is earthed, makes sliding contact at its rear end with a resistance wire or strip 22, the ends of which are connected respectively to the coils 10 and 11 of the galvanometer 9.

In further applications, apparatus for the indication of variations in temperature and inclination are described and illustrated.

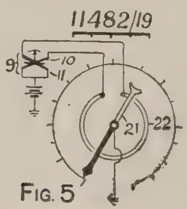


FIG. 5

7 figures, 3 claims.

11,524. 20 June. B. T. BROOKS, New York, United States of America.

Date applied for under International or Intercolonial Arrangements, 20th June, 1918, United States of America, Serial No. 240,907/*18*.

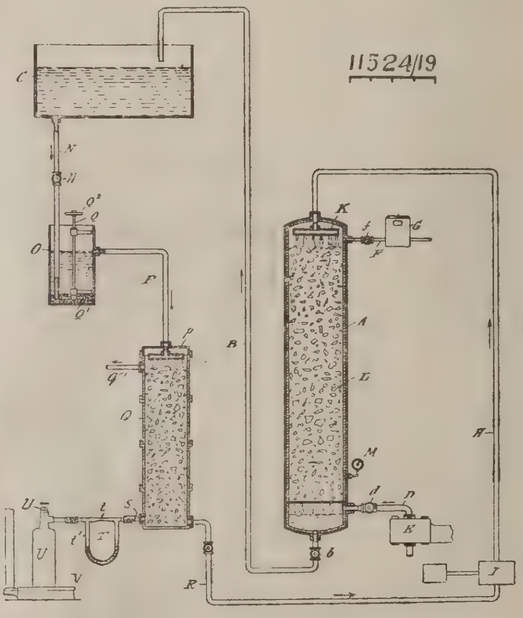
Class 09.2.

Chlorhydrins.

A process for making chlorhydrins which consists in subjecting unsaturated hydrocarbons under pressure to a weak solution of hypochlorous acid.

A 1 to 2 per cent solution of an alkali salt, such as soda bicarbonate, is agitated in a chamber **O**, and passes through pipe **P** and sprayer **p** into a vessel **Q** supplied with chlorine, giving the following re-action :— $NaHCO_3 + H_2O + Cl_2 \rightarrow NaCl + HOCl + H_2CO_3$. The solution of HOCl is passed through pipes **R** and **H** by a pump **I** to the top of a reaction vessel **A**, where it comes into proper contact with olefine gas, supplied under pressure through a pipe **D**. The chlorhydrin solution formed is passed off periodically to the tank **C** from which it flows to the mixing chamber, dissolves the soda bicarbonate added from time to time, and overflows to the chlorination vessel and is circulated as before, until the concentration of chlorhydrin reaches the desired strength, which should preferably be less than 4.5 per cent. The solution is then run from the storage tank to a suitable distilling apparatus and distilled.

Basic salts capable of neutralizing hydrochloric acid, or salts of hypochlorous acid, which will free hydrochloric acid by hydrolysis, may be used instead of alkali salts.



1 figure, 7 claims.

Illustrated Notes—*continued.*

11,540. 8 June. P. Holyer, N.S.W.

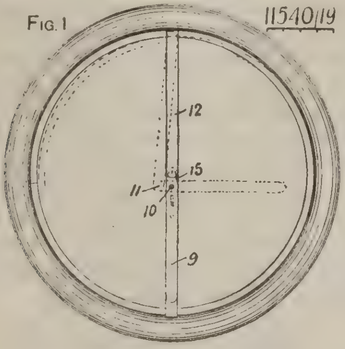
Class 97.87.

Tyre Changing Tool for Split Rims.

To facilitate the removal of a tyre from a split rim, members 12, hooked on to the rim at opposite points, are adjustably articulated at 10, 11 to a lever 9 which, when moved upwards, draws the members together, thus springing the rim inwards.

A screwdriver-shaped portion 15 is provided for prising the abutting ends of the rim apart prior to placing the appliance in position.

Fig. 1 11540/19



3 figures, 4 claims.

11,560. 24 June. R. H. Warner and K. G. Palmertz, Victoria.

Sec. 63a. Including cognate No. 13,633/*19*.

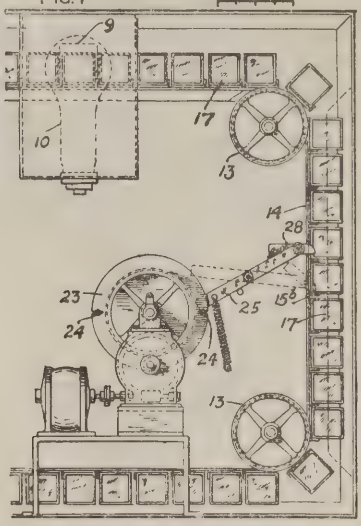
Classes 54.18; 53.4.

Advertising Apparatus.

To project a series of advertisements by means of lantern slides on to a display screen, an endless flexible conveyor belt 14, provided with a series of slide carriers 17 mounted on pulleys 13, is given a forward movement at each half-rotation of the dial 23 by tappet pins 24 which contact with and operate a control lever 25 connected with a pawl 28 which engages a lug **15b** on each slide carrier 17 and thereby imparts an intermittent movement to the belt past the projecting orifice 9.

The illuminating media 10 behind the slide and a light placed adjacent to the screen are caused to flash in and out alternately by an electric contact making and breaking device which effects two breaks in the electric circuit for every revolution of the dial 23.

Fig. 1 11560/19



8 figures, 8 claims.

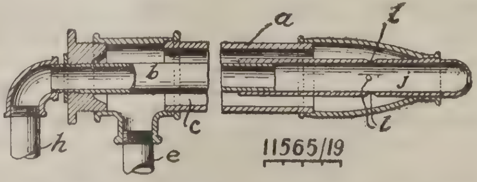
11,565. 24 June. W. McNeilage, *assignee of* C. G. Cunningham, *act. inv.*, Vic.

Class 23.3.

Oil Fuel Burner.

To effectually mix the air and oil and to heat the latter prior to its mixture with the air, a burner comprises concentrically arranged tubes **a**, **b** for oil and air, respectively, and a nozzle **j** which communicates directly with the air pipe **b** and through small holes **l** with the oil pipe **a**.

The oil is preheated in space **c** by radiation from the burner and combustion chamber, and passes into the nozzle through the holes **l**, the pressure of the oil being maintained at from 3-5 lb. per square inch above that of the air.



11565/19

1 figure, 6 claims.

Illustrated Notes—*continued.*

11,580. 26 June. W. C. Yeates, Qld.

Class 81.9.

Gate Hinge.

To make a double gate self-closing, its upper rail **E** has, at its centre, a V-shaped undersurface **F** resting in a V-recess **B** on the cap of the post, with side peaks **D** disposed on opposite sides of the centre line. A pivot pin **G** guides the rail upwards during opening, and a strap, loosely embracing the post, keeps the bottom rail in place.

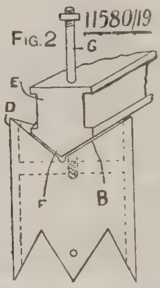


Fig. 2

5 figures, 5 claims.

11,587. 27 June. W. Rintoul, T. J. Nolan, and Nobel's Explosive Company Limited, Scotland.

Date applied for under International or Intercolonial Arrangements 14th June, 1918, Great Britain, No. 9849/*18*.

Class 89.8.

Nitroglycerin Explosives.

To gelatinize cellulose nitric esters in the manufacture of explosives, urethanes, characterized by containing attached to the nitrogen atom two aromatic groups one of which is a benzyl or a substitute benzyl group, are employed in the following proportion according to the physical condition of the desired explosive:—

For explosives in the form of a cord or strip, nitroglycerin, 45 per cent; soluble nitrocellulose, containing 12.2 per cent nitrogen, 45 per cent; benzyl ortho-tolyl urethane, 10 per cent. For explosives in flake form (a) nitroglycerin, 41 per cent; soluble nitrocellulose, containing 12.2 per cent nitrogen, 50 per cent; phenyl benzyl urethane, 9 per cent. (b) Nitroglycerin, 41 per cent; soluble nitrocellulose, containing 12.2 per cent nitrogen, 50 per cent; benzyl para-totyl urethane 8.5 per cent; ethyl beta-naphthyl ether 0.5 per cent. (c) Nitroglycerin, 41 per cent; soluble nitrocellulose, containing 12.2 per cent nitrogen, 50 per cent; phenyl benzyl urethane, 8 per cent; di-phenyl urethane, 1 per cent.

No drawings, 6 claims.

11,597. 27 June. W. Carroll, *act. inv.*, and C. G. Leighton, *assignee*, N.S.W.

Class 18.3.

Building Composition.

To produce a fire-resisting, non-conducting, non-absorbent, and waterproof material for building construction, the following composition is employed:—Portland cement 30 lb., pumice stone 48 lb., fibre (hemp) 1 lb., sufficient water to render the above ingredients plastic, sodium carbonate 3 lb., linseed oil 3¾ lb., dry glue 8 lb., dry lime 12 lb., and sulphuric acid 5¼ lb. The last five ingredients are brought to a dry compound by heating in a mixing machine and then mixed with the plastic mixture formed by the first four ingredients.

No drawing, 2 claims.

11,624. 30 June. S. D. Ritchie, New South Wales.

Class 96.4.

Axle-box.

To facilitate draining and cleaning and removal of the pad and supporting spring in a railway axle-box, the lower portion of the casing has sides inclining towards the bottom 14, which is also inclined longitudinally towards an end plug 6.

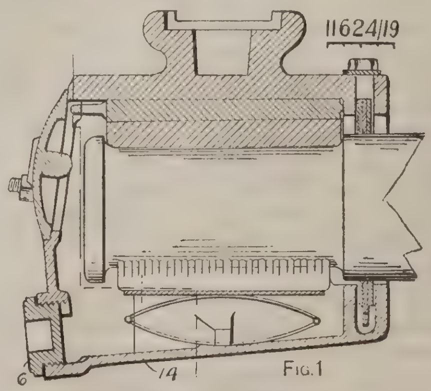


Fig. 1

2 figures, 3 claims.

Illustrated Notes—*continued.*

11,718. 8 July. N. Fredriksson, Sweden.

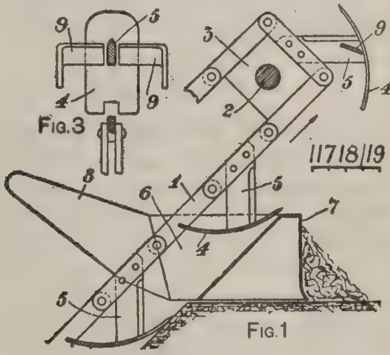
Classes 84.35 ; 84.6.

Mechanical Shovel.

An excavator for digging drains in which the shovels 4 are secured to an endless chain 1 by means of arms 5 located centrally between the side edges of the shovels, leaving both sides open to the scrapers 9.

The chain 1 passes over a sprocket 3 secured to the driving shaft 2, and between a pair of scrapers 9 which are rigidly fixed to the frame of the machine.

In a modification, the shovels are considerably narrower than the cutting breadth of the machine, the supporting arms being located at the centre of the machine and at the inner edges of the shovels, which are arranged to cut the right and left-hand side alternately leaving their outer sides open to the scrapers.



4 figures, 2 claims.

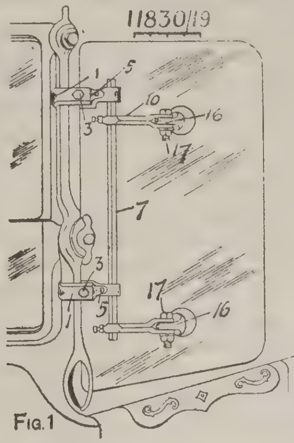
11,830. 17 July. M. G. Witham, New South Wales.

Classes 93.2 ; 93.9.

Wind Screen.

To attach a glass side screen to the main wind screen, a rod 7 having attached arms 10 is secured to the stanchion by clamps 1, the jaws of which are brought together by bolts 3 and locked by set-screws 5.

The arms 10 are pivoted by bolts 17 to short arms 16 which pass through holes in the glass and are secured by felt washers and a lock-nut.



5 figures, 7 claims.

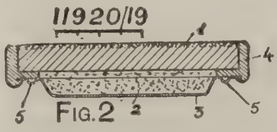
11,920. 25 July. F. Walsh, *communicatee of* Electro-Industrie E.G., *assignee of* F. P. Baumann, *act. inv.*, Switzerland.

Class 07.1.

Dry Cell.

A dry cell in which the carbon electrode 1, composed of compressed brownstone and graphite, is insulated from the zinc electrode 3 by an L-shaped guard 4.

The electrolyte 2 is contained in the latter electrode and a longitudinal gutter 5 serves to receive any exuding electrolyte. The positive electrode 1 has its outside face impregnated to a certain depth with a waterproof substance, such as paraffin.



2 figures, 2 claims.

Illustrated Notes—*continued.*

12,053. 7 Aug. S. Hendley, *communicatee of* M. L. Bramson, J. Hanson, and T. B. Caldwell, *act. invs.*, England.

Class 74.5.

Joint for Flexible Pipe Lines.

To prevent leakage and loss of flexibility a ball-and-socket joint comprising a cup member 2, a ball member 4 and a bearing ring 7, is provided with a packing washer 6, which forms an extension of the inner end of the ball member 4.

The ball member 4 is formed of a portion only of a sphere and is rigidly connected by a screw connexion 5 to the end of the pipe section 1. The cup member 2 is screwed at one end to the pipe section 1 and at the other to the bearing ring 7.

In a modification, screw connexions 3 and 5 are dispensed with, cup member 2 and ball member 4 being made integral parts of pipe sections 1.

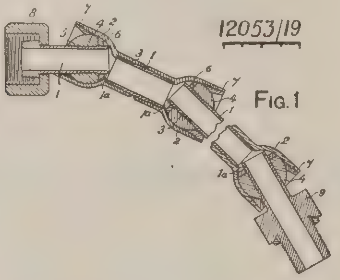


Fig. 1

3 figures, 5 claims.

12,062. 7 Aug. L. N. Vincent, Wash., United States of America.

Class 60.9.

Grease Plug.

To force grease into a crank-pin bearing a reciprocating hammer is adapted to act upon a piston by which the lubricant is expelled from its container. The grease container 21 is attached to a connecting-rod by means of socket 1, and is fitted with a piston 3 which is pressed against the grease by a spring 6, and has a hollow extension 30 within which reciprocate a weight 4 and a check member 5. At each revolution of the engine the weight 4 travels along the stem 50 thereby hammering on the piston and forcing the lubricant through the orifice 12 on to the bearing.

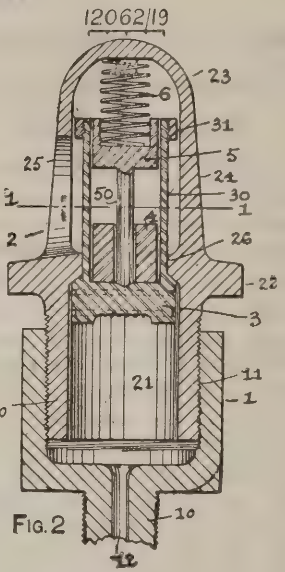


Fig. 2

2 figures, 5 claims.

12,063. 7 Aug. L. N. Vincent, Wash., United States of America.

Class 64.5.

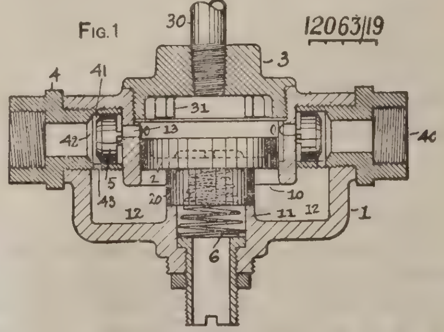
Cylinder Drainage Valve.

A relief valve for engine cylinders having a drainage outlet 11 closed by a valve 20 carried by a piston 2 which is subjected to high pressure steam entering through a pipe 30, and is opened by excess pressure of the water accumulating in a chamber 12.

The drain pipes from the cylinder ends are closed by valves 5 which are forced open by the pressure of the water when the piston is at either end of its stroke. When the collecting chamber is full the piston 2 is similarly forced up to open the drainage outlet.

A spring 6 maintains the valve open when the steam pressure is shut off

Fig. 1



2 figures, 3 claims.

Illustrated Notes—*continued.*

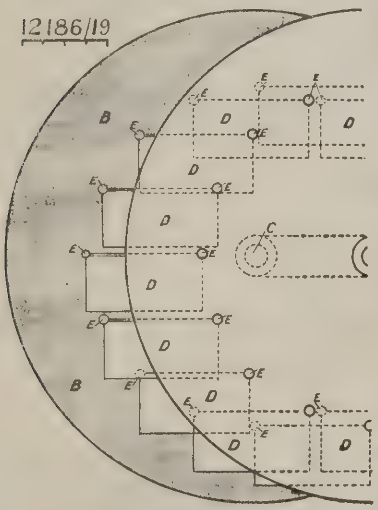
12,186. 20 Aug. J. D. and D. Sloan, Scotland.

Classes 82.4 ; 67.5.

Water Wheel.

A water wheel or tidal mill in which a number of equidistant plates **D** are suspended perpendicularly by means of cross-bars **E** between a pair of side frames **A**, **B** which rotate on a shaft **C**.

The plates are of sufficient weight to keep them perpendicular when immersed in the stream or tide.



1 figure, 3 claims.

12,370. 4 Sept. J. White, jun., *assignee*, and A. W. Wall, *act. inv.*, England.

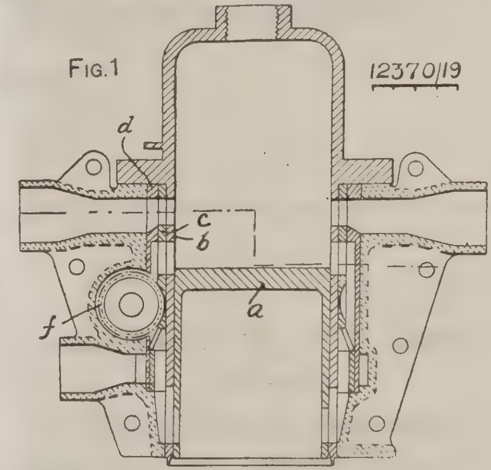
Classes 66.2 ; 66.7.

Internal Combustion Engine.

A two-cycle engine in which a sleeve valve **c**, having exhaust and inlet ports adapted to register with corresponding openings in the cylinder **b**, is rotated around the cylinder by means of a worm-wheel **f**.

During the first part of the combustion stroke the exhaust ports are protected from the ignited fuel by the piston **a** the face of which, when at bottom dead centre, is located further from the exhaust ports than from the inlet. The sleeve valve **c** rotates once every six revolutions of the crank-shaft, its ports registering with the ports in the cylinder on two or more occasions during each crank-shaft revolution but closed by the piston except when it is at the end of the power stroke.

Fig. 1



4 figures, 11 claims.

12,436. 8 Sept. E. Phillips, *communicatee of* Taylor-Wharton Iron and Steel Company, New Jersey, United States of America, *assignee of* F. V. Johnson, *act. inv.*

Class 93.5.

Endless Tread Tractor.

To make the entire length of the track-laying units effective to support the weight of the tractor and to allow the units to readily adapt themselves to uneven ground conditions, the track frame **1** consists of angles **2**, formed in two parts **8** and **10** pivotally attached at **12** by plates **9** and **11**, the free ends of the angles being provided

[*Continued next page.*

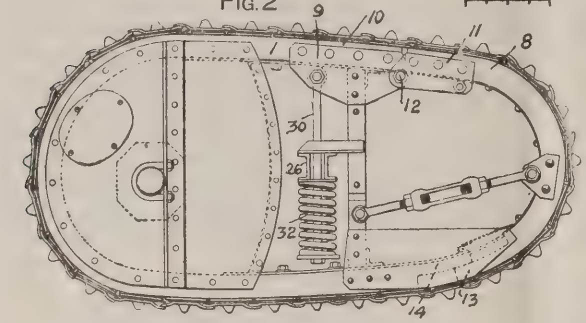
Illustrated Notes—*continued.*

with overlapping tongues **13** and **14** to form a continuous trackway.

The track member **10** is stiffened by a strut **16**, and the track units as a whole are pivotally mounted on the non-rotary axles **25**, movement being limited by springs **32** in contact with laterally projecting beams **26** and supported on eye-bolts **30**. The driving wheels **39**, driven from the gear box through shafts **135** and pinions **47**, drive the track by means of sprocket **45** engaging with links **66**. Rollers **61** are positioned in channels formed by angle members **2** and **60**, and within central openings of these rollers are balls of slightly larger diameter than the width of the rollers, to take the side thrust. Two hand-levers operate disk clutches to transmit power to either or both driving wheels **39**.

12436/19

Fig. 2



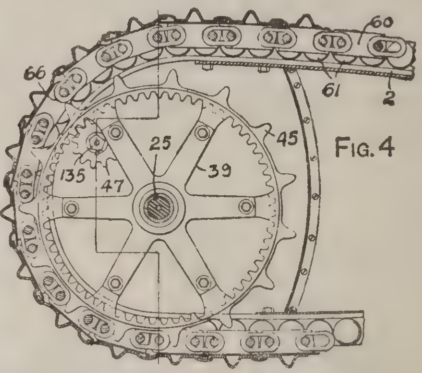


Fig. 4

17 figures, 10 claims.

12,766. 3 Oct. W. C. Moor, Canada.

Class 90.5.

Aeroplane Level-indicator.

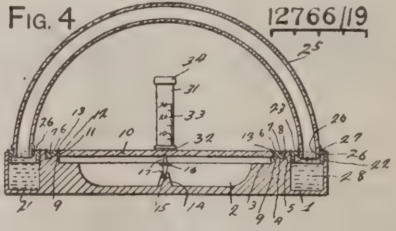
To indicate both the lateral and longitudinal inclination of the aeroplane, a casing, having an annular chamber, is fitted with graduated glass tubes in which the inclination is measured by the rise or fall of a non-freezing liquid.

The annular chamber **21** is filled with liquid **28** and is connected at points 180° apart by a semicircular graduated glass tube **25** cemented into openings **26** in a flange ring **23**. At openings **32** in the flange ring midway betwen the openings **26** two vertical graduated glass tubes **31** are fitted. Lateral inclination is measured by the rise or fall of the liquid **28** in the tube **25** and longitudinal inclination by the level of the liquid in tubes **31**. The dish portion **2** of the casing **1** carries a compass needle **16** mounted on pivots **17**. The upper pivot runs in a bearing formed in the crystal disk **10** which rests on an annular shoulder **9** and is clamped in position by an annular screwed ring **6** engaging with the bevelled edge **11** of the crystal disk **10**.

The shoulder **3** of the casing is provided with compass card graduations.

In a modification, the annular chamber is replaced by two reservoirs connected by means of two semicircular horizontal tubes.

Fig. 4 12766/19



9 figures, 3 claims.

Illustrated Notes—*continued.*

12,720. 1 Oct. Western Electric Company Limited, *assignee of* C. S. Demarest, *act. inv.*, New York, United States of America.

Class 05.7.

Electrical Signalling System.

A composite telegraph and telephone signalling system in which signalling currents of a frequency suitable for transmission over one section of the line are translated into signalling currents of a frequency suitable for transmission over another section of the line.

Associated with the conductors 1 and 2 by means of the leads 4 and 5 is the filter 8 which acts to suppress currents of all frequencies other than the low frequency 16 cycle current generated at the switch board apparatus connected to section L¹. This low frequency current is then transmitted to the input circuit of the harmonic producer A¹, the output current of which includes a current component having a frequency of 133 cycles. Filter 12 permits the passage of 133 cycle current to the amplifier A² the output circuit of which is connected to conductors 15 and 16. A portion of the current from the amplifier A² is transmitted to the rectifier A³ and thence to energize the direct current relay 19 to connect the section L² to the conductors 15 and 16.

Incoming 133 cycle current from the section L² passes by means of conductors 6 and 7 to the filter 20 and amplifiers A⁴, A⁵ and to the rectifier A⁶, and thence to energize the direct current relay 27 to connect to the section L¹ over conductors 29 and 28 a source of 16 cycle current suitable for use with the switchboard apparatus. In modifications the incoming and outgoing currents may be utilized to operate relays to connect to the different sections sources of current of a frequency most suitable for working thereover.

Fig.1

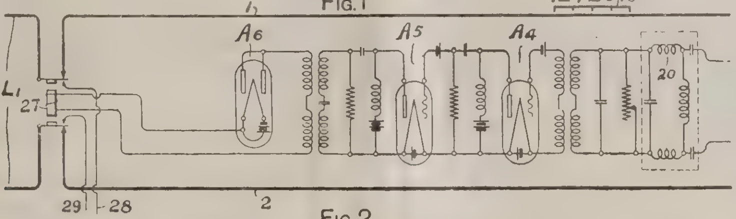
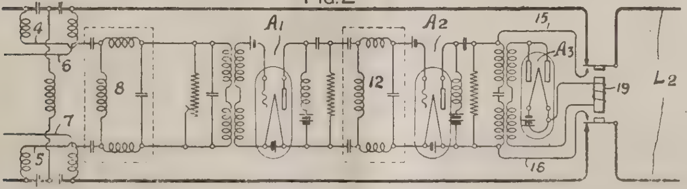


Fig.2



4 figures, 7 claims.

12,767. 3 Oct. E. M. Blacksher, Alabama, United States of America.

Class 90.5.

Aeroplane Stabilizer.

To stabilize an aeroplane and prevent nose-diving and tail-spinning, auxiliary horizontally-operating propellers, rotating in opposite directions and operated through a clutch and gearing from the engine, are mounted in concavities in the underside of the outer ends of the under planes.

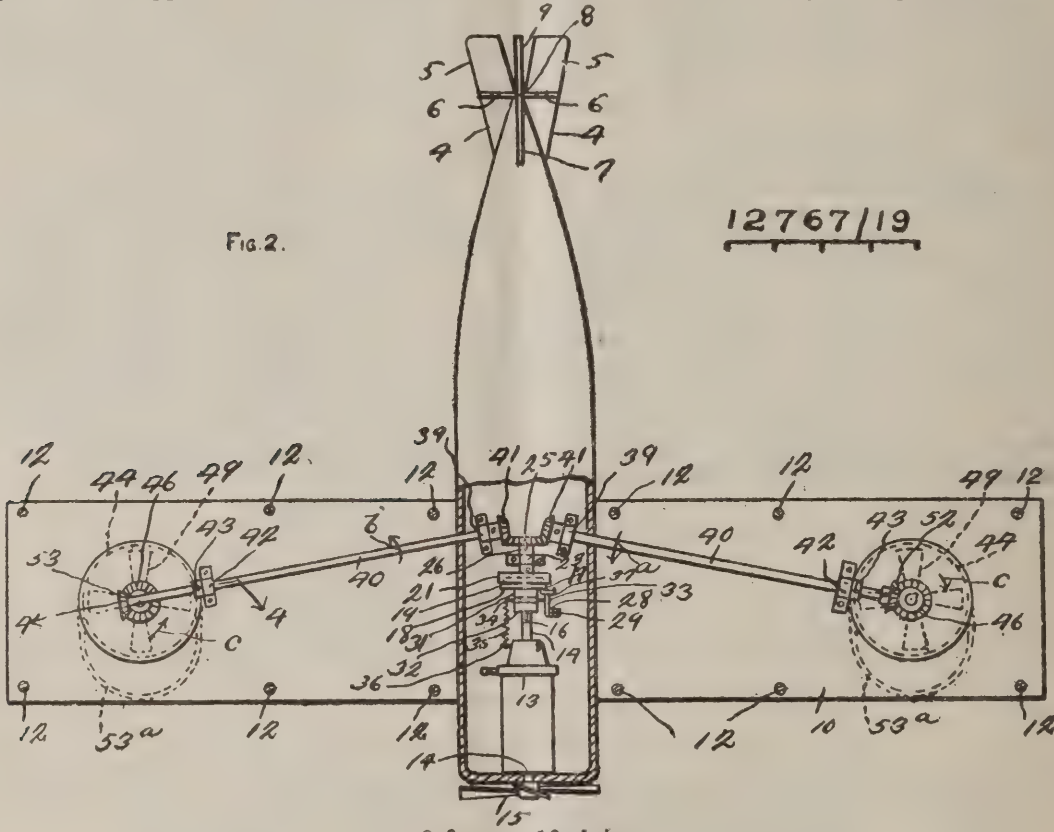
On the machine beginning to nose-dive or tail-spin, the clutch member 18 on the engine shaft 14 is moved into engagement with the clutch member 21, imparting motion to the gear wheels 25 and 41 and rotating shafts 40 in opposite directions. Gear wheels 52, 53 on the shafts 40 mesh with pinions 46 on the shafts of propellers 49 mounted in and conforming to the concaved depressions 44, rotating the propellers in opposite directions and imparting an

[*Continued next page.*

Illustrated Notes—*continued.*

equalizing or stabilizing influence to the machine. Wind shields **53a** divert the air flow from the propellers when the propellers are not in action.

In a modification, the stabilizing propellers are applied to a monoplane, the housing concavities and wind-shields being dispensed with, elongated wind-shields housing the propeller shafts; while in a modification of the clutch mechanism, the female member of the clutch is fixed to the engine shaft, the clutch being foot-operated.



9 figures, 10 claims.

12,878. 13 Oct. A. T. Ellis, *act. inv.*, and H. A. Hands, *assignee*, England.

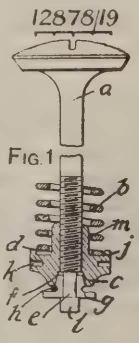
Class 66.7.

Valve Spring Retaining Collar.

To prevent the collar **c**, which holds the spring **b** in position, from becoming unscrewed, a supplementary split collar **g**, having a cone-shaped projection fitting into a corresponding conical recess in the collar **c**, is sprung around a reduced portion **e** of the spindle **a**.

The part **l** is of less diameter than the screwed part of the spindle **a**, to allow the main collar to be slipped on, recesses **k** being provided in the collar for turning purposes. The supplementary collar **g** is embraced by a spring **h**, which allows it to be sprung into position.

In a modification, the supplementary collar is provided with a radial slot and is held in place by the cone recess in the main collar.



4 figures, 7 claims.

Illustrated Notes—*continued.*

12,869. 13 Oct. F. F. Lowndes, N.Z.

Class 88.7.

Life-saving Device.

To enable shipwrecked persons to cling to the keel of an overturned boat, rails **3** are provided which are attached to the keel **1** by collapsible brackets **4**, **5**, **6**, and fit into a recess **10** in the keel when not in use. In a modification, fixed brackets are used.

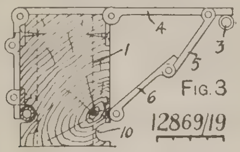


Fig. 3

5 figures, 7 claims.

12,889. 14 Oct. A. H. Hindle, S. W. Savage, A. Liddle, and A. E. Dabbs, Eng.

Date applied for under International or Intercolonial Arrangements, 16th Oct., 1918, Great Britain, No. 128,486.

Class 60.8.

Roller Bearing.

A cage for rollers or balls, which comprises a pair of concentric rings **1** and **2** with registering slots **3**, the closed ends of which retain the rollers or balls in place.

The slots **3**, which have curved edges to prevent radial displacement, are formed by assembling a pair of rings together and drilling them simultaneously. The rings are then separated and reassembled with their slots in register.

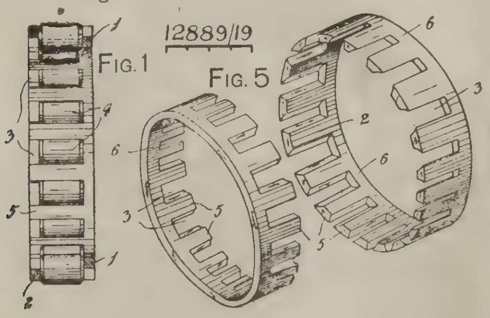


Fig. 1 Fig. 5

5 figures, 4 claims.

13,018. 24 Oct. M. Heffernan, Vic.

Class 22.4.

Attachment for Liquid Container.

To draw off or introduce liquid to a container, a tube, having a piercing and cutting end **8**, is provided with a coil spring **10** adapted to press the container surface against a flexible stop **16**.

A part **9** of the coil is fixed to the stem at right angles thereto, while the other end of the coil is free and is housed in a ring **10a**, within the ring cushion **16**, and abuts against a stop **15**. Vent holes **17** are provided.

After inserting the cutter, further rotation advances the stem and coil into the container until the stop **16** meets the outer face of the container which is gripped between the spring and the stop.

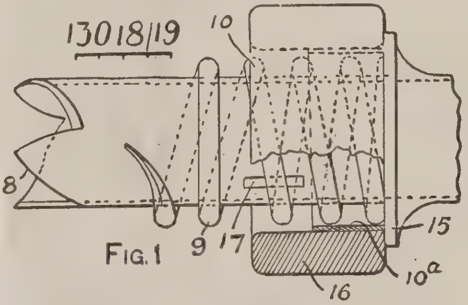


Fig. 1

3 figures, 7 claims.

13,065. 27 Oct. H. H. Hosack, Eng.

Class 70.4.

Ingot Casting.

To prevent oxidation due to splashing and to permit the use of a hot feeding head in casting steel ingots, the mould is filled through a rising pilot ladle and is covered with a heat-retaining hood when filled.

The pilot ladle **a**, counterbalanced by weights **d**, receives the metal from the ladle **b** and sinks to the bottom of the mould **c**, into which it discharges without splashing, through perforations in its wall. As the mould fills, the pilot ladle rises and is finally withdrawn from the mould when pouring ceases. The use of a hood **g**, with hollow

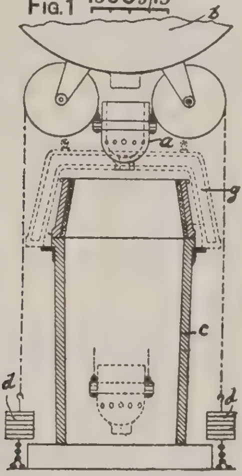
[*Continued next page.*

Illustrated Notes—*continued.*

walls, from which the air has been extracted, causes feeding head to be retained in a fluid condition in the top of the mould for a considerable time.

In modifications, the pilot ladle is counterbalanced by a single weight, and consists of two vessels one inside the other, and is provided with an automatic plug which opens on striking the bottom of the mould.

FIG. 1 13065/19



6 figures, 8 claims.

13,038. 25 Oct. F. G. PICKERING, Eng.

Date applied for under International or Intercolonial Arrangements, 10th Oct., 1918, Great Britain, No. 124,679.

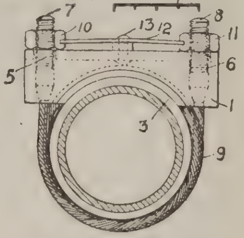
Class 74.5.

Jointing Clip.

To join together lengths of metal pipes, a rubber sleeve placed over the ends of the pipes is surrounded by a binding wire the ends of which pass through a saddle-piece at right angles thereto.

A protective metal band is placed over the rubber sleeve 3 and the binding member 9 is given one or more turns around the sleeve. The screwed ends 7, 8 are passed through holes 5 and 6 in the saddle-piece 1 and are tensioned by nuts 10, 11, locked by a spring plate 12 held in position by a screw 13. To facilitate detachment one hole is slotted, permitting the screwed terminal end to be slipped from the saddle when the nut is slackened.

FIG. 1 13038/19



8 figures, 4 claims.

13,123. 30 Oct. H. D. HENDERSON, Victoria.

Class 70.1.

Mould Box.

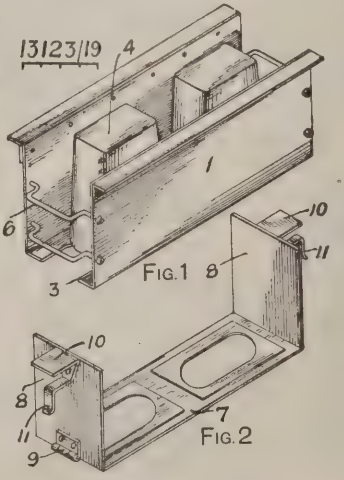
A mould for hollow concrete blocks in which provision is made for removing the block without dismantling the mould.

The mould consists of a metal frame 1, having cores 4 integral with internal flanges 3, and a removable part 7 which fits within the mould proper having a false bottom and upturned ends 8, one of which is hinged at 9.

The end plates of the removable portion have brackets 10 and clips 11, the latter locking over the tie bars 6 connecting the sides of the mould 1.

In a modification, one vertical side is hinged and has a pattern plate thereon.

13123/19



7 figures, 4 claims.

Illustrated Notes—*continued.*

13,179. 3 Nov. Stokes and Smith Company, *assignee of* A. J. Morrison, *act. inv.*, Penn., United States of America.

Class 48.3.

Coating Paper.

A paper coating machine in which the sheets are damped and passed on to an adhesive coating roller having circumferential grooves accommodating lifters for causing the sheets to separate from the rollers and wipers for removing adhesive matter from the grooves.

The lowermost sheet in the stack is carried by a plurality of rubber belts **31** through an adjustable gate **36** where it is engaged by friction rollers **27, 28** and urged along a stationary table **29** to a coating roller **9** having peripheral grooves in which lifting fingers **21** are housed.

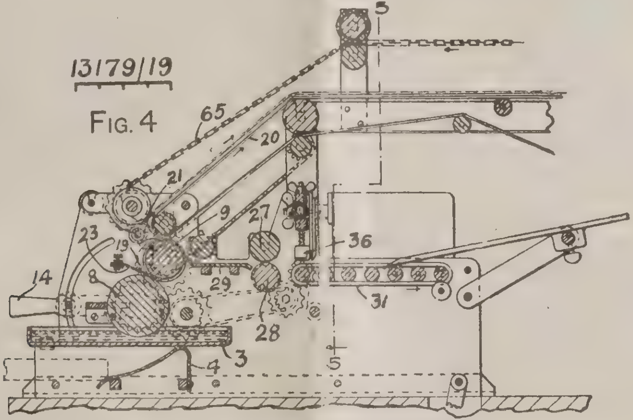
A dipping roller **8**, vertically adjusted by levers **14** and locked by side nuts, rotates in the pan **3** and conveys adhesive to the coating roll. The fingers **21** lift the sheet on to a water-moistened canvas conveyor belt **20** above which there runs a chain belt **65** to restrain the sheet from buckling while being carried to the point of discharge.

The pan **3** may be removed by sliding it along a slanting rest **4**, while the supply of adhesive held in a pocket **19** between the rolls **8, 9** is sufficient to immediately continue the coating after a temporary stoppage of the machine.

In a modification, a combined lifter and wiper is shown which dispenses with the cleansing wipers **23**.

13179/19

Fig. 4



14 figures, 16 claims.

13,225. 7 Nov. R. S. Whaley, Eng.

Date applied for under International or Intercolonial Arrangements, 23rd Nov., 1918, Great Britain, No. 19,304.

Class 66.2.

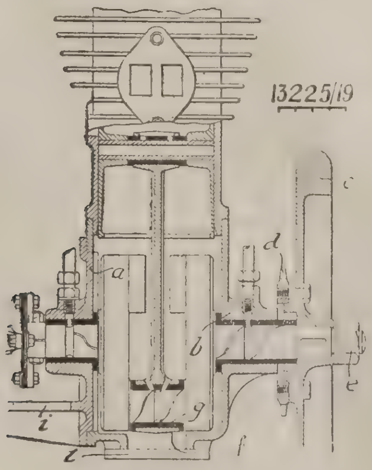
Internal Combustion Engine.

To enable an engine to be easily dismantled, the cover-plate **a** is detachably fixed to the crank chamber so that the crank-shaft may be removed axially when freed from the big end of the connecting rod, and from the fly-wheel **c**.

The big end **f** of the connecting rod is divided into two parts held together by screws or bolts, to which access is obtained by the removal of a plate **l** attached to the periphery of the crank chamber.

The cover-plate **a** may be furnished with an integral bracket **i** upon which the magneto may be mounted.

13225/19



1 figure, 7 claims.

Illustrated Notes—*continued.*

13,268. 11 Nov. E. C. Hanson, Wash., D.C., United States of America.

Date applied for under International or Intercolonial Arrangements, 7th Sept., 1915, United States of America, Serial No. 49,287/*15*.

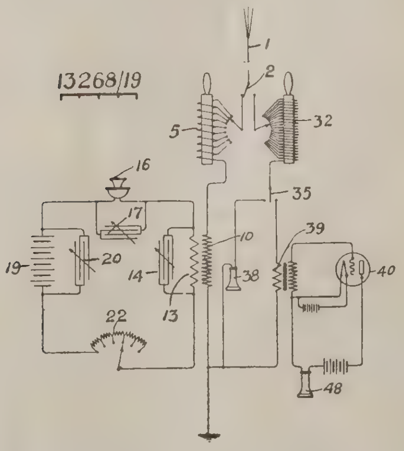
Class 05.5.

Radio Telephony.

A system in which waves of audio frequency are generated at the transmitting station and are amplified at the receiving station, iron core reactors being used at both stations to eliminate waves other than those of audio frequency.

The sending circuit comprises a telephone transmitter **16** having in series therewith a battery **19**, a variable resistance **22**, and the low tension winding **13** of an iron core transformer, the transmitter, battery and winding being shunted, respectively, by variable condensers **17**, **20** and **14**. The high tension winding **10** of the transformer is connected to earth and to a variable iron core reactor **5** which is connected by the switch **2** to the single aerial **1**.

For reception, the aerial is connected through the same switch **2** to a similar variable iron core reactor **32**, which may be connected to earth by the switch **35** either through the telephone receiver **38** or through the primary winding **39** of a transformer, the secondary of which has in circuit therewith a further receiver **48** and a vacuum tube amplifier **40**.



1 figure, 8 claims.

13,279. 11 Nov. G. Van Oordt, Switzerland.

Class 15.8.

Metal Hardening.

To increase the hardness and tenacity of metals as aluminium or its alloys, and permit of their being worked with cutting tools, the metal is heated to or below its characteristic heat-hardening temperature, the heat-hardening is interrupted before the attainment of the final condition, and the metal worked with a cutting tool, after which the heat-hardening is continued until the desired or maximum hardness has been attained.

No drawing, 5 claims.

13,312. 14 Nov. C. A. Witter, Penn., United States of America.

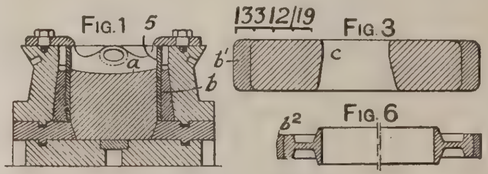
Class 71.5.

Manufacturing Metallic Shapes.

A process for manufacturing rails and the like in which an ingot is flattened, punched to form a hole and enlarged to form a ring which is subsequently cut and straightened.

In forming an ingot of two grades of steel a removable partition 5 of less diameter than the mould is inserted therein forming spaces **a** and **b**. Low grade steel is poured into space **a** and high grade steel into space **b** when the partition 5 is withdrawn allowing the two metals to flow together. The formed ingot is then reduced to a bloom by forging, and piping is removed by punching a hole **c**. The bloom is then increased in diameter by a becking hammer or roughing mill and shaped. The finished ring blank thus formed is then cut and passed through a straightening mill, the high grade steel **b**^{1} forming the wearing surface **b**^{2}.

In a modification, the bloom consists of one grade of metal and is not reduced to the required shape in the circular form but is left as a blank which may be reduced and shaped in the ordinary rolling mill.



17 figures, 5 claims.

Illustrated Notes—*continued.*

13,323. 17 Nov. J. B. Morony and P. S. Garling, New South Wales.

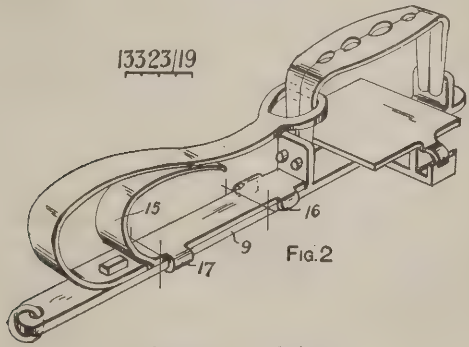
Class 38.7.

Animal Trap.

To obviate fracturing or weakening of the primary spring of an animal trap, an auxiliary spring is placed under the main spring to increase the resiliency of the primary spring and to evenly distribute the strains on the active portion thereof.

The auxiliary spring 15 has formed thereon clamps 16 and 17, the latter clamp passing around the base 9 of the trap and securing the auxiliary spring in position.

In a modification, the U-shaped auxiliary spring is replaced by a coil spring, while in a modification of the attaching clip, a separate flat piece binds the auxiliary spring to the base 9.



7 figures, 5 claims.

13,443. 28 Nov. C. F. Higgins and J. Gunn, England.

Class 69.1.

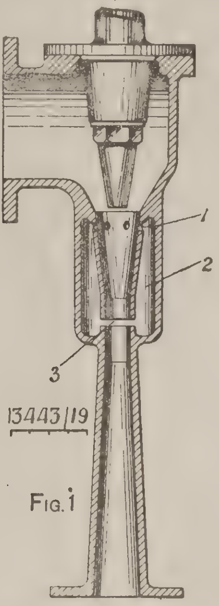
Stabilizing Ejectors.

To stabilize an ejector a by-pass circuit is provided for conducting fluid from some suitable position within the system to the convergent portion of the combining tube of the ejector.

In Fig. 1 the by-pass circuit is constituted by a passage 2 which leads from the opening 3 in the throat back to a position 1 behind the throat.

In modifications, means are provided for varying the area of the opening in the throat, comprising slideable sleeves forming the throat or an annular throttle valve.

In a further modification, an intermediate condenser is arranged between two steam ejectors employed in withdrawing aerated vapour from a main condenser, and the aerated vapour is caused to by-pass from one ejector to the other, the by-pass being controlled by an automatic valve adapted to open and close in accordance with the pressure or degree of vacuum in the intermediate condenser.



5 figures, 6 claims.

13,350. 20 Nov. J. C. Kennedy, N.Z.

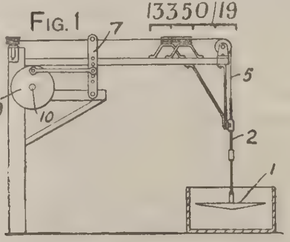
Class 36.2.

Agitator for Liquids.

An agitator for milk and like liquids, in which an arm oscillated by a crank actuates a rope by which a pair of agitating plates are alternately raised and lowered.

The plates 1 are mounted on the lower ends of rods 2 and actuated by a rope 5 attached to a lever 7 adjustably coupled to a crank-disk 9 on the power shaft 10.

In a modified form, a number of plates are arranged in rows, and each row connected to the operating rope, so that when one row is raised the other row is lowered.



6 figures, 4 claims.

Illustrated Notes—*continued.*

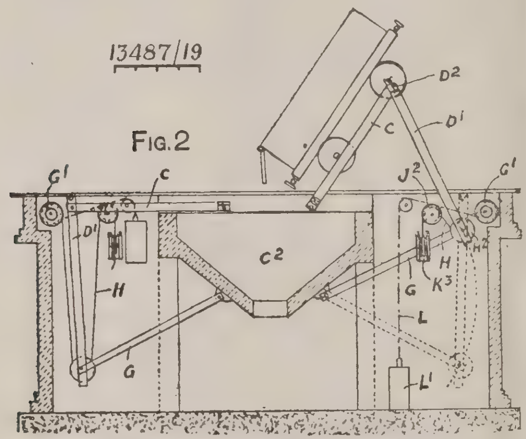
13,487. 2 Dec. W. Reid, Scotland.

Class 98.8.

Waggon Tipping.

To discharge the contents of a waggon into a hopper, a platform **C**, pivoted at one end, is raised by a hoisting beam **D**^{1}, the head of which has in it a groove **D**^{2} to engage the rear axle of the waggon. Pivoted to the lower end of the hoisting beam **D**^{1} are guide rods **G**, the opposite ends of which are pivoted to the underside of the hopper **C**^{2}. Lifting power is supplied from the winding drum **G**^{1} by a rope **H** which passes over pulleys **H**^{2}, **J**^{2} and a tensioning device **K**^{3}.

Counterbalance weights **L**^{1} may be connected to extensions on the ends of the winding drum **G**^{1} by ropes passing over the pulleys **L**.



5 figures, 3 claims.

13,543. 4 Dec. Corning Glass Works' *assignee of* H. P. Page and W. Churchill, *act. invs.*, New York, U.S.A.

Classes 53.4; 00.4.

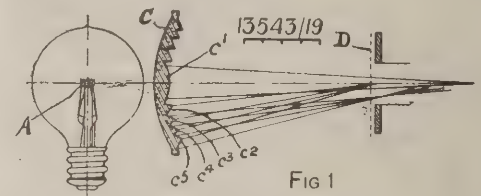
Picture Projection.

To overcome the irregular field of illumination arising from the use of concentrated filament incandescent lamps when used as an illuminant in picture projecting apparatus, a condenser is used having negative spherical aberration whereby the beam from each point of the light source projected on the slide or film by the condenser as a whole is not sharply focussed upon the slide or film.

In Fig. 1, a condensing lens **c** of the Fresnel type is used in which the central bull's-eye **c**^{1} focuses light from the source **A** at a point which is slightly beyond the plane **D** of the picture to be projected and the rays from the several zones **c**^{2}, **c**^{3}, **c**^{4} and **c**^{5} cross the principal axis at different points between such front conjugate focus of the bull's-eye and the film **D**.

To overcome the usual difficulties of adjustment, means are provided whereby the operator has merely to adjust the light source in respect to the condenser so that the latter will, in conjunction with the objective, bring the light source to a sharp focus located at a plane depending on the characteristics of the condenser.

Modifications comprise, a lens having a convex aspheric uniform surface, a deeply curved negative lens as one element of a condenser, a Fresnel lens as described in combination with a lens having positive spherical aberration and a similar combination in which the Fresnel lens is provided with diffusing flutes arranged in parallelism with the bands of light source and means to rotate the lens at right angles for purposes of adjustment.



14 figures, 12 claims.

13,548. 5 Dec. O. G. Stark, *assignee of* J. Flammang, *act. inv.*, Missouri, U.S.A.

Class 60.7.

Piston.

To maintain the necessary surface pressure between the cylinder and piston without the use of piston rings, the top portion **2** of the piston wall is put under permanent expansion strain.

The top portion **2** is split at **8** and the gudgeon pin holes are inclined downwards so that, after insertion of the pin **9**, the walls tend to move outwards. Keys in the form of plates **18**, seated in grooves in the ends of the ring sections, extend into a flange on the head-plate **15**, locking the ring and head-plate together and preventing passage of gas or steam past the split **8**. Oil-retaining grooves are formed in the bottom

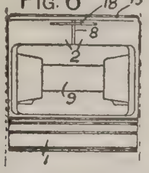
[*Continued next page.*

Illustrated Notes—*continued.*

ring **1**, and oil scraping portions at the top and bottom portions of rings **1** and **2**, respectively.

13548/19

Fig. 6



7 figures, 9 claims.

13,551. 5 Dec. O. G. Stark, *assignee of* J. Flammang, *act. inv.*, Missouri, U.S.A.

Class 60.7.

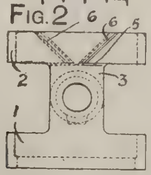
Piston.

A piston in which a ring portion is divided into segmental sections which are put under expansion strain in a circumferential direction to impart pressure uniformly against the cylinder wall.

The members **3**, connecting the upper and lower members **2** and **1**, are cut at **5** for less than half their width and the ring **2** is cut diagonally at **6**. The cuts **5** are closed by applying heat and pressure, and the piston is then machined and a top plate fitted and keyed to the ring member **2**.

13551/19

Fig. 2



9 figures, 7 claims.

13,549. 5 Dec. O. G. Stark, *assignee of* J. Flammang, *act. inv.*, Missouri, U.S.A.

Class 60.7.

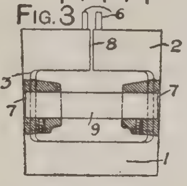
Piston Manufacture.

To construct a piston which will function without the aid of packing, a casting, comprising lower and upper ring portions **1** and **2** and integral connecting portions **3**, is provided with gudgeon pin holes **7** which incline downwards and towards the centre.

The top ring portion **2** is split at **8**, and, upon insertion of the gudgeon pin **9**, the halves of ring **2** are forced apart. The lugs **6** are drawn together by a bolt and nut, and the piston is machined, inserted in a cylinder, and turned off below the arms which connect lugs **6** to the ring. A cap portion is attached by means of keys, oil-collecting grooves formed around ring **1**, and oil-scraping bevelled portions formed on the upper and lower edges of rings **1** and **2**, respectively.

13549/19

Fig. 3



7 figures, 9 claims.

13,552. 5 Dec. O. G. Stark, *assignee of* J. Flammang, *act. inv*, Missouri, U.S.A.

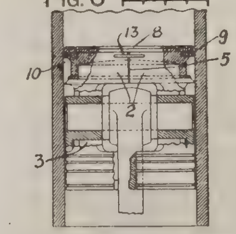
Class 60.7.

Piston.

A piston in which an upper ring member **2** is divided by cuts **5** into several equal segmental sections, which are forced outwards radially by the resiliency of the metal.

A head-plate **8**, having a bevelled portion **9** abutting against the bevelled upper edges **10** of the segments, exerts an expanding force against the segments when the explosion occurs. When the cuts **5** have been made, the segmental sections are compressed, connexions **3** bent in opposition to the resiliency of the metal, and the piston machined, keys **13** being seated in grooves in the ring sections and extending into the head-plate.

Fig. 6 13552/19



6 figures, 6 claims.

Illustrated Notes—*continued.*

13,553. 5 Dec. O. G. STARK, *assignee of* J. FLAMMANG, *act. inv.*, Missouri, United States of America.

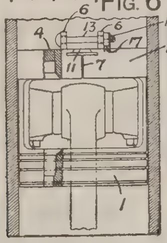
Class 60.7.

Piston.

A piston in which the top ring member 2 and head-plate 4 integral therewith are split at 7 and the sections separated, the expansive tension being regulated by a bolt and nut uniting the sections.

The bolt 13 which is inserted in lugs 6 closes the slit 7 during the time the piston is machined, and afterwards, limits the expansion of ring 2 against the cylinder wall, the nut 14, when adjusted, being locked by means of a spring 17. A wedge-shaped groove is formed in the head-plate to accommodate a wedge 11 which seals the space 7.

13553/19 FIG. 6



7 figures, 6 claims.

13,554. 5 Dec. O. G. STARK, *assignee of* J. FLAMMANG, *act. inv.*, Missouri, United States of America.

Class 60.7.

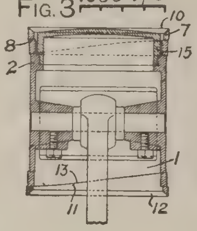
Piston.

To enable a piston to maintain close sealing contact with the cylinder wall without the use of separate piston rings, ring segments 7 and 11 are formed on the ring portions 2 and 1, by means of spiral cuts 8 and 13, the segments being cut diagonally at their ends and expanded to a diameter greater than that of the piston body.

Bevelled oil-collecting edges 10 and 12 are formed on the ring segments, and a head attached to the upper portion of the piston by means of a screw-threaded extension 15.

In a modification, the head is made integral with the piston body.

FIG. 3 13554/19



5 figures, 9 claims.

13,555. 5 Dec. O. N. TEVANDER, Illinois, United States of America.

Class 57.5.

Bottle Closure Applying Machine.

A machine for applying skirted caps to bottles in which the cap is secured by string wound around the skirt and fastened by a strip of metal bent over and crimped upon the overlapping ends of the string.

The bottle 29 is placed between teeth 32 on a table 31 and is intermittently rotated until it is brought over the top of a sleeve 37. A cam 41 on a shaft 51 lifts the lever 39, which, through the spring 38, raises the bottle in vertical alinement with a sleeve 59 carrying a guide 69 which partially collapses the cap skirts prior to the application of the fastening string. The fastening mechanism is set in action by a bell crank lever 62 operated by a clutch pin moving in a V-shaped recess in the pulley and hub of a cam disk on the shaft 47.

The main shaft 43 operates a feeding, cutting, and crimping device for a metal strip 78 which is formed with a groove to accommodate the string by a lever 99 in which is a slot 99^2 adapted to receive an adjustable pin 99^1, for adjusting the cutting and gripping device. String is supplied from a bobbin 141 and passes over wheel 143 and alines with the bore of the string guide

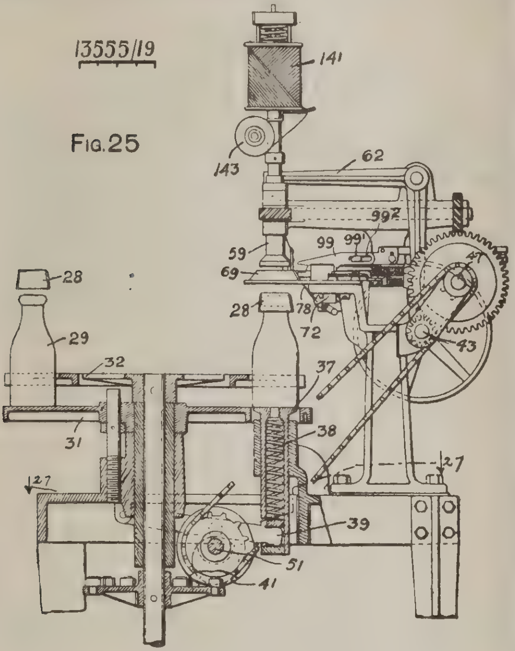
[*Continued next page.*

Illustrated Notes—*continued.*

which passes the string around the bottle and cuts it when fastened.

13555/19

Fig. 25



27 figures, 6 claims.

13,557. 5 Dec. F. Hachmann, Missouri, United States of America.

Class 60.7.

Piston Ring.

To form a long lap, one-piece, resilient ring, a pair of rings 9 and 10, assembled with the splits 11 diametrically opposite to one another, are held together by rivets of soft material pressed into holes formed in the contacting faces of the rings.

The inner face of each ring is formed with two screw-threaded recesses 12, with an enlargement 13 formed at their bottom ends, both of which recesses are on the same half of the ring. Pressure is applied to the outside faces of the ring so that the rivets 15 swell and fill the threads and recesses, thus securely locking the parts together, but allowing the ring to retain its resiliency.

13557/19

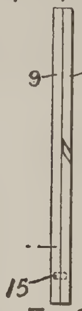


Fig. 2

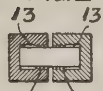


Fig. 7

7 figures, 5 claims.

13,558. 5 Dec. F. Hachmann, Missouri, United States of America.

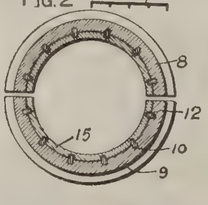
Class 60.7.

Journal Bearing.

To augment the wearing qualities of a babbitted metal bearing and obviate the drilling of anchor holes, copper retaining ribs 12 are pressed into longitudinal grooves 10 in the bushings 8, 9, after which the whole is tinned and babbitt metal 15 is poured into the bushings.

In a modification, the base of each rib is wedge-shaped and registers with a dovetailed slot in the bushing, while in a further modification, a plain round wire is utilized.

Fig. 2 13558/19



8 figures, 5 claims.

Illustrated Notes—*continued.*

13,575. 5 Dec. J. B. Regan, *assignee of* A. G. Shaver, *act. inv.*, Illinois, United States of America.

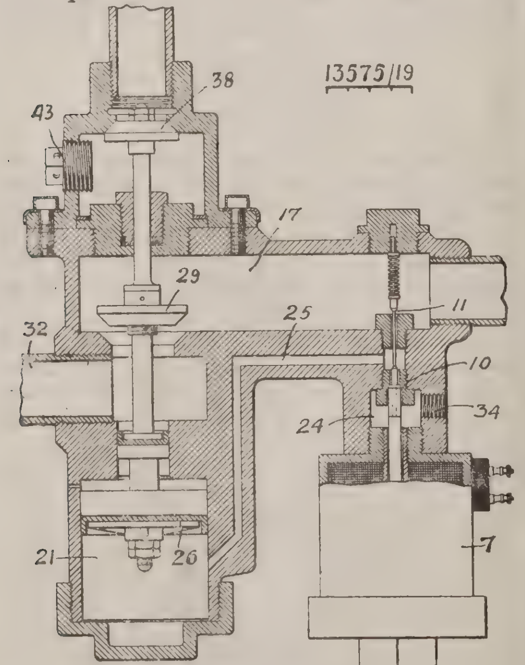
Class 96.6.

Air Brake Valve.

A valve for automatic stop and train control systems, which, under abnormal conditions, will simultaneously isolate the air reservoir from the enginedriver's brake valve, and vent the air brake system.

A valve **11**, controlled by an electro-magnet **7**, normally admits compressed air to the chamber **21**, actuating a piston **26** to which is connected an outlet valve **29** which controls the supply of air from the auxiliary reservoir to the brake valve pipe **32**. A valve **38**, operated simultaneously with valve **29**, controls the release of air from the air brake system.

When the electro-magnet **7** is de-energized, or the air pressure fails, the valves operate by gravity in such a way that the valve **29** is closed to isolate the reservoir from the enginedriver's brake-valve, and the valve **38** opens to vent the air brake system through the port **43**, valve **11** is closed, and valve **10** opens to allow the passage of air from the piston chamber **21** through chamber **24** and port **34** to the atmosphere.



1 figure, 8 claims.

13,577. 5 Dec. J. B. Regan, *assignee of* A. G. Shaver, *act. inv.*, Illinois, United States of America.

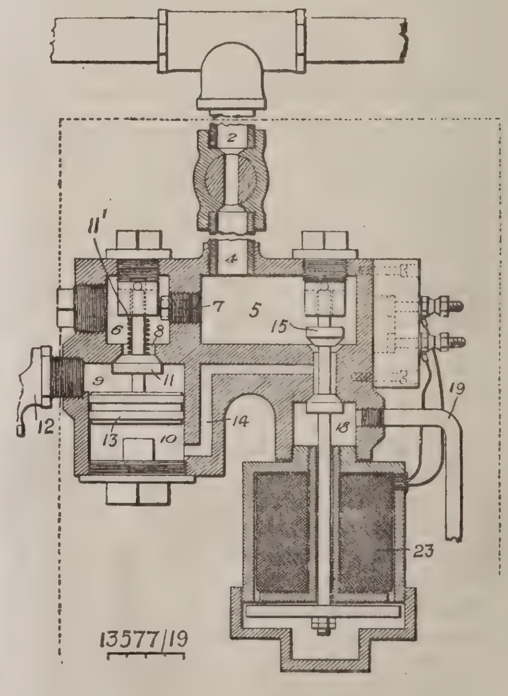
Class 96.6.

Brake Pipe Valve.

To provide a valve for use with automatic train control systems, which will control the flow of air to vent the air brake system, a casing is provided with three chambers, the first of which **5** is adapted to receive air under pressure which is admitted by an electrically controlled valve **15** through a passage **14** to the second chamber **10**, to operate a piston **13** and a valve **11** which is normally held closed, but when open permits the air from the chamber **5** to vent through the sleeve **7** and port **8** to the exhaust pipe **12**.

When the coil **23** is de-energized the valve **15** will be closed and the valve **17** will be opened by gravity, and air will escape from the chamber **10** through the passage **14**, chamber **18**, and pipe **19** to atmosphere.

Upon failure of the air the valve **11** will be opened by gravity, assisted by the spring 11^1, and the air brake system will be automatically vented.



1 figure, 5 claims.

Illustrated Notes—*continued.*

13,601. 6 Dec. Aktiebolaget Bofors, *assignee of* N. R. M. Weibull, *act. inv.*, Sweden.

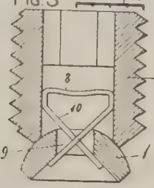
Class 78.3.

Set-screw.

To secure even bearing of the cup-point of a set-screw, when used in an inclined position, the cup-point consists of a separate piece 1, bearing spherically in the end of the screw proper 6, with which it may be connected by a wire 8.

The end of the screw may be slit and sprung so as to automatically tighten in the hole which receives it.

Fig. 3 13601/19



4 figures, 4 claims.

13,581. 5 Dec. J. D. and E. M. Tucker, California, United States of America.

Class 66.5.

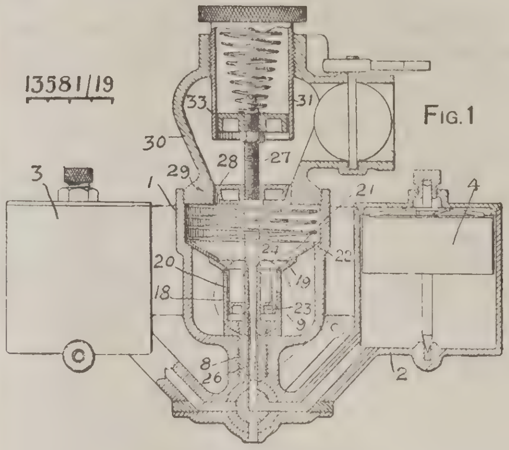
Carburettor.

To produce a carburettor in which the fuel is automatically and correctly mixed with air at all engine speeds and in which the fuel is very highly atomized, two carburetting chambers are used and the incoming air is drawn directly against the mouth of the fuel jet.

The jet 8 is contained with the primary chamber 1 and is surrounded by a sleeve 18 orificed at 20 and provided with a flange 19. A guide 23 slidably surrounds the jet 8 and is connected by wires 24 to a dished washer 21 seated on the flange 19 and on the chamber 1 at 22. The needle valve 26 is provided with a stem 27, having a valve member 28 adapted to seat in the throat 29 of the secondary carburetting chamber 30 and a guide piston 33 lightly spaced within an adjustable guide cylinder 31. Air is admitted at 9 to the primary chamber 1 through an air valve having a spring-controlled valve piston and the usual butterfly valve.

Two float chambers 2 and 3 are provided, one of which contains a highly volatile fuel for starting and the other a heavier and cheaper fuel for running.

13581/19 Fig. 1



3 figures, 8 claims.

13,610. 8 Dec. F. J. T. Barnes, *act. inv.*, D. M. Fraser and E. M. Shaw, *assignees*, Queensland.

Class 68.3.

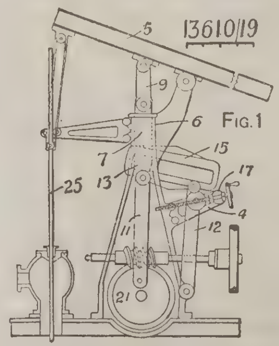
Pump.

A balance rocking beam pump in which the stroke is varied from zero to a maximum by connecting the beam 5 through a link 9 and a plunger 7 with a rocking block 13 upon which slides an adjustable link 15.

The rod 7 reciprocating in the cylindrical casing 6 is bifurcated to straddle the block 13 sliding within the elongated slotted link 15 which is pivotally connected at one end by a rod 11 with the worm-driven wheel 21 and supported at the other by a connecting rod 12 pivoted to the standard.

A bracket 4 carries an adjusting screw rod passing through a pivot pin 17 and the bifurcated end of the connecting rod 12 to adjust the range of stroke of the pump rod 25 by moving the link along the block.

13610/19 Fig. 1



6 figures, 3 claims.

Illustrated Notes—*continued.*

13,809. 29 Dec. G. G. Turri, *communicatee of* J. H. Hume, *act. inv.*, Scotland.

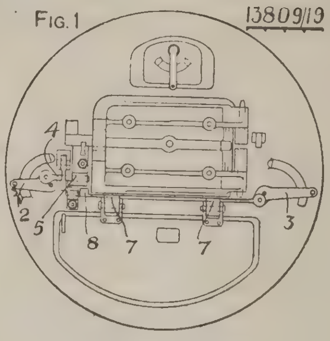
Class 16.8.

Furnace Front.

To prevent the opening of a firing door in a forced draught furnace before both the separately operated air supply valves are closed, the valve handles **2** and **3** are connected with door locking bolts **4** and **8**, slidably mounted in guides **5**, **7**.

In a modification, the door **1** may be provided with a depending lug in its lower edge for engaging the lug **8**.

Fig. 1



4 figures, 1 claim.

1920.

13,885. 3 Jan. M. A. Glendale, New South Wales.

Class 35.4.

Alimentary Substance.

A food comprising a base of dried animal flesh free from bone impregnated with a liquid or viscous extract of meat.

The meat is thoroughly cooked by roasting, steaming or boiling until it becomes fibrous and easily desiccated. It is then placed in an evaporator and dried. If 20 lb. of meat have been cooked to form a base, about 100 lb. of meat are used to obtain the extract. The latter is placed in a digestor and cooked until it leaves the bone, after which part of its fat is removed and it is treated in an evaporator until it is reduced to a viscous state. The base is then introduced into the extract in the proportion of about 3 oz. to 1 lb. The impregnated fibre is treated until all the moisture is evaporated after which it may be ground to a powder and packed in suitable containers.

In lieu of desiccation the base may be boned, and retorted or roasted until it is very much overdone, and subjected to pressure.

No drawing, 3 claims.

13,966. 9 Jan. Corning Glass Works, *assignee of* J. Bailey, *act. inv.*, New York United States of America.

Classes 16.45; 19.6; 15.8.

Heat Treatment of Articles.

To anneal articles such as electric lamp bulbs, the articles are passed through an exteriorly heated rotating inclined cylinder **10** by which they are rotated about an axis at an angle to the direction of feeding movement, thus causing them to advance through the cylinder.

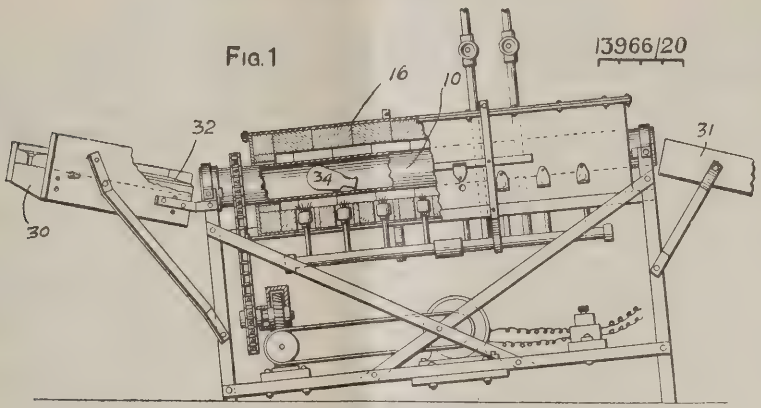
The cylinder is located within an insulated chamber **16**, provided with an inclined feeding trough **30** having a central channel **32**, whereby the conoidal bulbs **34** are delivered, with their necks down, to the revolving chamber **10**. Upon reaching the end of the chamber **10** the bulbs fall on to the removing trough **31**.

In a modification, cylindrical articles are fed along a chamber which is conoidal in shape.

[*Illustration next page.*

Illustrated Notes—*continued.*

Fig. 1



5 figures, 7 claims.

14,013. 14 Jan. Automatic Electric Company, *assignee of* J. Erickson, Illinois, United States of America.

Class 05.2.

Electro-magnetic Relay.

To enable a relay to operate with either direct or alternating current without chattering of the armature, the armature 3 is hingedly mounted on a heel-plate 2 forming part of the magnetic circuit and on energization of the coil is moved to its operated position by the movement of a roller combination 9 over the non-magnetic spool-head 10 encircling the core 12.

In a modification, the armature is fastened to the heel-plate by a sheet of spring steel, and the roller combination is hinged to the armature by a spring clip arrangement.

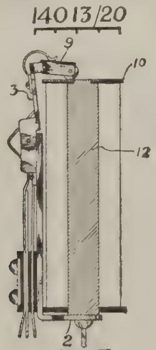


Fig. 5

7 figures, 14 claims.

14,248. 4 Feb. M. Condé, Germany.

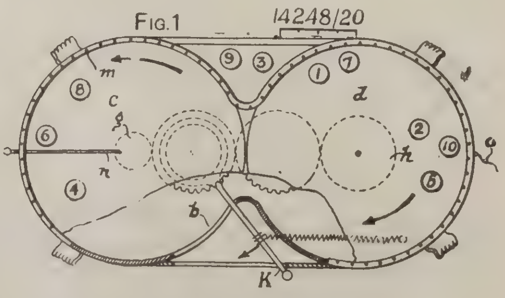
Class 53.8.

Race Game.

A race game in which counters are caused to move upon two adjacently disposed disks c and d rotated at different speeds by a hand-operated lever K through gearing.

The numbered counters are alined by a starting rod n and when the disks are rotated, the counters contact with spring pins m suspended around the 8-shaped enclosure b, and move across the tracks with a sinuous motion, the winner being determined by the counter nearest the winning post o when the disks cease rotating.

Fig. 1



2 figures, 1 claim.

Illustrated Notes—*continued.*

14,281. 6 Feb. A. P. Crosby, *act, inv.*, and W. T. Price, *assignee*, Minnesota, U.S.A.

Class 81.6.

Vapour Heater Valve.

To maintain an even temperature with a vapour heater system a trap with siphonic discharge is employed to draw off air and water of condensation from the radiators.

The water of condensation fills the trap and overflows the dam 13 starting a siphonic action which, when established, draws air from the radiator, and allows the vapour to fill up all sections. After the radiator becomes heated, condensation is reduced and the trap is sealed preventing the passage of vapour through the radiator. A port 14 automatically prevents the accumulation of air in the radiator and intermittently stops the siphonage, and a check valve E prevents the return flow of any water or vapour into the radiator.

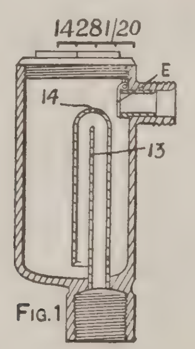


Fig. 1

2 figures, 2 claims.

14,694. 11 Mar. G. A. Bennett and F. B. A. Kirsten, Victoria.

Class 48.8.

Loose-leaf Binder.

A loose-leaf binder in which two back pieces 4 and 5, to which covers are attached, having their inner surfaces concaved as at 10 to form gripping lips 11, are secured together by tapes 14 tightened by a key 26.

The tapes are secured at 31 to the back 5 and passed through passageways 13 and along a groove 22 to a slot 27 in the split key 26, whose end may be threaded and which is adapted to be rotated by a ring 28 to wind up or release the tape. Springs 7 fixed to the back pieces automatically open these when the tapes are slackened.

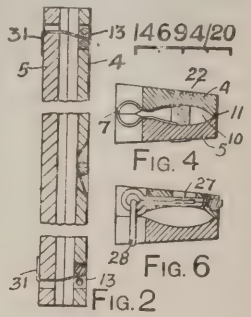


Fig. 4

Fig. 6

Fig. 2

8 figures, 11 claims.

14,727. 12 Mar. E. M. Johnson, Oregon, United States of America.

Class 38.5.

Fish Trap.

A trap net which may be raised or lowered to any depth by forcing or withdrawing air through a hose 6 which leads to flexible internal linings 15 within pipe rings 1, 2, 3, 4.

The pipe rings serve as supports for the net, the bottom of which may be wire and the sides of twine.

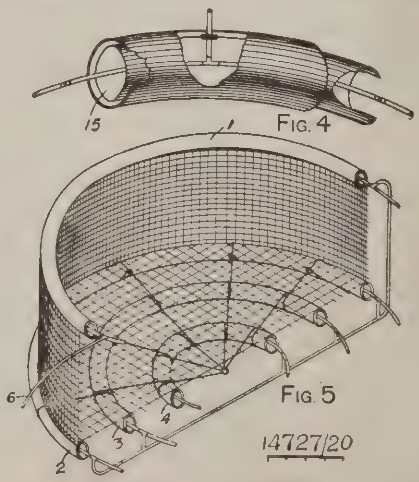


Fig. 4

Fig. 5

6 figures, 7 claims.

Illustrated Notes—*continued.*

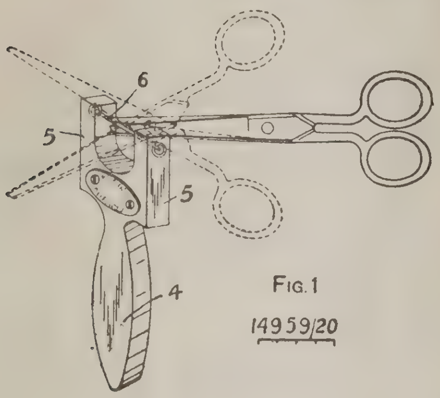


Fig. 1

14959/20

14,959. 30 Mar. E. H. Scott, N.S.W.

Classes 75.2; 54.12.

Scissors Sharpener.

To sharpen scissors the blades are reciprocated across a hardened steel wire 6 stretched between the arms 5 of a holder 4. The wire may be secured by riveting or by a milled thumb-screw, and provision is made for displaying an advertisement upon the handle.

3 figures, 3 claims.

Commonwealth Specifications.

The following Specifications are now on sale :—

1904-10.

1 to 20,337, Vols. 1 to 102, complete with title pages, &c.

1911-15.

1 to 7599, Vols. 103 to 140, complete with title pages, &c.
7600 to 7799, Vol. 141, incomplete.
7800 to 8599, Vols. 142 to 145, complete with title pages, &c.
8600 to 18,302.

1916.

1 to 646, and all subsequent accepted Specifications.

The following Specifications, acceptance of which was advertised in *Official Journal* of the 22nd June, 1920, are now printed and on sale :—

1917.

3096. Friend.

1918.

7216. Alston.
7742. Vereinigte Hüttenwerke Burbach-Eich-Düdelingen Aktiengesellschaft (Arend).
9320. Bagley.
9644. McNicol.

1919.

9825. Gibbins.
10,355. Waterhouse.
10,698. Unsen.
10,719. Turner.
11,261. Strong (Olson).
11,262. Condy.
11,310. The Mantle Lamp Co. of America (Simonson & Blair).
11,423. Nicol.
11,462. Jack & Taylor.
11,468. Aktiebolaget Ljungströms Angturbin (Ljungström).
12,027. Le Plastrier (Rigling).
12,028. Holmes.
12,060. Crowe.
12,064. Lenfestey.
12,072. Scerri.
12,104. Western Electric Co. Ltd. (Vennes).
12,116. Stadel.
12,140. Crozier.
12,268. Roscoe.
12,296. Benard.
12,389. Williamson.
12,504. Hi-Glo Sign Co. (Smith).
12,505. Ballentine.
12,525. Carmody & McAuley.

Commonwealth Specifications—*continued.*

1919.

12,533. Moss.
12,655. Harford.
12,726. Hudson.
12,739. Doyle.
12,801. Collison (Benedict).
12,831. Eells.
12,833. Lee.
12,921. James.
13,002. Brady.
13,049. W. & T. Avery Ltd. (Howell & Brown).
13,054. Waters (Westinghouse Air Brake Co.—Woernley).
13,066. Spiess.
13,103. Boonzaier.
13,208. Jones.
13,226. Whaley.
13,231. Waters (Daubenspeck & Winder).
13,265. Gale.
13,379. Torakichi Umeda.
13,432. Ure & Dowsett.
13,435. Hood, Clark, & Clark.
13,534. Stamp.
13,561. Jacobs.
13,707. Greenway.
13,867. Singmaster, Breyer, & Hall.

Further particulars will be found in the Illustrated Notes, pages 806 to 828 of Vol. 32.

The Specifications are forwarded to the following places, where they are open for *free* public inspection :—

Victoria :
Melbourne—Commonwealth Patent Office, Railway Buildings, Flinders-street.
Public Library, Swanston-street.

New South Wales :
Sydney—Trade Marks Sub-office, Commonwealth Bank Buildings.
Public Library, Macquarie-street.

Queensland :
Brisbane—Customs House, Queen-street.
Public Library, William-street.

South Australia :
Adelaide—Post Office Buildings, King William street.
Public Library, North Terrace.

Western Australia :
Perth—Customs House, William-street.
Public Library, Beaufort-street.

Tasmania :
Hobart—Customs House.

New Zealand :
Wellington—Patent Office.

Great Britain :
London—Patent Office, Southampton Buildings.
Commonwealth Office, Australia House, The Strand.
Birmingham—Reference Library, Ratcliff-place.
Dublin—National Library, Kildare-street.
Glasgow—The Commercial Library, 21 Miller-street.
Manchester—Free Library, Deans Gate.
Swansea—Public Library.

United States of America :
Washington, D.C.—Patent Office.

France :
Paris—Office National de la Propriété Industriéllé, 292 Rue Saint-Martin.

Norway :
Christiania—Patent Office.

Japan :
Tokyo—Patents Library.

Other places will be duly announced.

Complete sets of Printed Specifications may be obtained from the Government Printer Melbourne, at 4d. per copy delivered over the counter. Specifications relating to one Group of manufacture, in order as issued, or such of the Specifications (in one Group) as may be selected from those already published, until 80 copies have been supplied, may be obtained on depositing £2. Parcels of 30 Specifications may be purchased at £1. Postage should be added to cheques if parcels are desired to be forwarded by mail. Single copies of Specifications, 1s. per copy, post free.

Printed Specifications are on sale at the Trade Marks Sub-offices, at Commonwealth Bank Buildings, Sydney, and at the Customs Houses, Brisbane, Adelaide, Perth, and Hobart.

Applications for Letters Patent for the period 1904 to 1910 were numbered from 1 to 20,337; for the period 1911 to 1915 from 1 to 18,302; a new series of numbers was commenced on the 1st January, 1916. To avoid confusion when purchasing Specifications, the **number**, **year**, and **name** of applicant for Letters Patent should be quoted.

* * *

Letters Patent Sealed.

Applications for enlargement of the time for payment of the renewal fee may be made on Form P.

The page and year quoted in last column refer to the Journal in which the notice of acceptance of Complete Specification was published.

Names of actual inventors, communicators, assignors, &c., who are not grantees are added in parentheses after the name of the grantee.

No.	Date of Patent.	Name of Grantee.	Abbreviated Title.	Page and Year.
	1918.	*15th June, 1920*		
9283	15 Nov.	J. B. Garde (Beatrice C. Garde & A. S. Howcroft)	Disk ploughs	211/*20*
	1917.	*21st June, 1920.*		
7295	9 May	C. Cruise	Bread baking tins	281/*20*
7655	14 June	W. W. Webster, E. Edser, & L. A. Wood	Concentration of tin and wolfram ores	281/*20*
	1918.			
7953	12 July	F. E. Elmore	Extracting lead and zinc from ores	318/*20*
8627	12 Sept.	W. R. Bates & H. R. L. Walker	Conveyor	318/*20*
8689	16 Sept.	Edith J. Weine ..	Goods hanger	281/*20*
9148	31 Oct.	A. H. Lymn & N. E. Rambush	Ammonia recovery	281/*20*
9156	31 Oct.	G. Sundback	Separable fastener slider ...	318/*20*
	1919.			
9742	6 Jan.	G. A. Worlley ...	Tree and stump puller ...	281/*20*
9747	7 Jan.	A. F. Ney	Attaching lids to cardboard boxes	281/*20*
	1918.			
10,029	24 Jan.	J. Wilson	Boxes and canisters	281/*20*
	1919.			
10,151	20 Feb.	A. H. Buckley ...	Mechanical piano players ...	245/*20*
10,156	21 Feb.	D. J. O'Curry ...	Cement tile making machines ...	245/*20*
10,158	21 Feb.	J. B. Davies	Spirally threading or grooving wire	245/*20*
10,234	28 Feb.	A. Menesdorffer ...	Dyes	281/*20*
10,287	3 Mar.	F. McCann	Shock forming machine ...	318/*20*
10,398	13 Mar.	C. J. Wattson ...	Rubber heel and sole	1086/*19*
10,444	19 Mar.	N. J. Curwood ...	Door fastener	281/*20*
	1918			
10,464	14 Mar.	F. Heale & G. W. Bryant	Kinematograph screens ...	318/*20*
	1919.			
10,694	8 Apr.	J. G. de Jetley-Marks...	Filing cabinets	281/*20*
10,900	1 May	Automatic Electric Co. (W. W. Owen)	Automatic telephone systems ...	281/*20*
11,270	29 May	Liberty Burner Co. (M. Yeager)	Hydrocarbon burners ...	318/*20*

Letters Patent Sealed—*continued.*

No.	Date of Patent.	Name of Grantee.	Abbreviated Title.	Page and Year.
	1919.	*21st June, 1920*—continued.		
11,686	4 July	Animated Picture Products Co., Inc. (C. W. Saalburg)	Camera for changeable pictures	281/*20*
11,792	14 July	B. G. C. Stephens	Switch for electric heating appliances	281/*20*
11,837	18 July	A. D. Lacy & T. P. Middleton	Photographic printing paper	281/*20*
11,849	18 July	H. K. Dyson	Building slabs	318/*20*
11,880	22 July	The P. & M. Company (H. G. Warr)	Rail anchoring devices	281/*20*
12,123	13 Aug.	Kokichi Mikimoto	Causing oyster to produce pearls	281/*20*
12,188	20 Aug.	F. J. J. Gibbons	Metal window frames and sashes	281/*20*
12,249	25 Aug.	O. Hermoye & C. Glorian	Hollow concrete constructional units	318/*20*
12,368	4 Sept.	O. Stott & E. R. Jones	Aeration of sewage	318/*20*
12,375	31 Jan.	F. S. Carr	Snap fasteners	318/*20*
12,481	28 Jan.	N. Pemberton-Billing	Heating and cooking apparatus	318/*20*
12,821	14 May	N. Pemberton-Billing	Stoves	318/*20*
12,847	9 Oct.	R. A. Pyke	Locking motor vehicle steering wheels	281/*20*
12,874	13 Oct.	E. Moss	Raising and lowering ploughs	318/*20*
		23rd June, 1920.		
10,063	8 Feb.	Agnes G. & Mabel D. Robson	Collar	318/*20*
10,353	10 Mar.	P. Burrill	Road vehicle wheel	318/*20*
10,368	11 Mar.	Bushnell Magneto Co. (J. B. Bushnell)	Magneto	318/*20*
12,061	7 Aug.	Naamlooze Vennootschap "Pinlock" Naatschappij tot Exploitatie van de veiligheidsmoer volgens de Buiten-Europeesche patenten "Systeem van der valk en van Eck (J. G. A. Goedhart)	Lock-nuts	318/*20*
	1918.	*24th June, 1920.*		
9609	23 Dec.	Western Electric Co. Ltd. (E. O. Scriven)	High frequency signalling system	281/*20*
	1919.			
10,637	1 Apr.	H. W. de R. Ham	Ram emasculator	318/*20*
10,830	23 Apr.	H. Galopin	Household lamps	318/*20*
11,981	1 Aug.	S. Hendley (American Spike Co., Inc., M. K. Sessler & H. Rosenberg)	Railroad spikes	281/*20*
12,067	7 Aug.	H. W. Gabbett-Fairfax	Automatic fire-arms	318/*20*
12,105	11 Aug.	F. Lock	Gauge and punch for binders	318/*20*
12,349	31 Jan.	F. Wilson	Animal covers	318/*20*
12,701	30 Sept.	W. H. Chandler	Automatically closing gates	318/*20*

Assignments Registered.

1918.

8987. "Mechanical treatment of zinc within condensers."

Assignment of whole interest *by* Edward Salomon Berglund *to*

Sven Huldt. Registered 23rd June, 1920.

9584. "Improvement in combination paper and fiber twine and in methods of manufacturing the combination twine."

Assignment of whole interest *by* Michael Joseph Rodney *to*

International Harvester Company. Registered 26th June, 1920.

1919.

10,001. "Improvements in centrifugal separators."

Assignment of whole interest *by* Ludvik Rasch *to*

Aktieselskabet Turbo-Separator. Registered 23rd June, 1920.

11,681. "Improvements in self-operating sound reproducing machines."

Assignment of whole interest *by* Cecil Woods Le Plastrier *to*

Jules Herbert Benjamin. Registered 23rd June, 1920.

* * *

Renewal Fees Paid.

(Names in parentheses indicate original grantees.)

No.	Name.	Abbreviated Title.	Paid up to—
		1912.	
5464	Rowland, R.	Using compressed air as motive power	27th June, 1926
		1913.	
9425	Faram, T. S.	Measuring discrete materials	16th June, 1927
9572	Temple, E., & Peick, A. H. W.	Purifying waste gases	28th June, 1927
9596	Bell, W. T., & Highton, F. S.	Stone breakers, &c.	30th June, 1927
9669	Ord, E. O. C.	Miners' gold pans	8th July, 1927
9780	Sutherland, W.	Whipcord	17th July, 1927
9799	The Eureka Milking Machine Co. Ltd. (Droutlege, H.)	Milk releaser	24th Jan., 1927
9819	Le Plastrier, C. W.	Bottle closures	21st July, 1927
9832	Voorhees, G. T.	Heating apparatus	22nd July, 1927
9868	American Machine and Foundry Co.	Packing cigarettes	24th July, 1927
9937	Stevens, C. H., & Hunter, S.	Percussive hand tools	29th July, 1927
10,699	Dresdner Dynamitfabrik	Cultivating the soil	29th Sept., 1927
11,054	Svenska Aktiebolaget Gas-accumulator	Lighthouses	28th Oct., 1927
		1914.	
12,940	Triplex Safety Glass Co. Ltd. (Lyttleton, W. R., & Triplex Safety Glass Co. Ltd.)	Strengthened glass	3rd July, 1927
12,941	Triplex Safety Glass Co. Ltd. (Lyttleton, W. R., & Triplex Safety Glass Co. Ltd.)	Luting joints with liquid cement	3rd July, 1927
13,254	General Electric Co. (Eaton, J.)	Electric switches	4th Aug., 1927
13,989	Bergius, W. M.	Bottle closures	31st July, 1927
		1917.	
4450	Tuggle, B. P.	Gold separators	2nd July, 1931

Patents Void through Non-payment of Renewal Fees.

(Names in parentheses indicate original grantees.)

1912.

No.	Name.	Abbreviated Title.	Patent Ceased
5410	Taylor, M. T., & Gardiner, J. F.	Rock drill chuck	22nd June, 1919
5411	Glover, J., & Floyd, J. A.	Gas heating apparatus	22nd June, 1919
5423	Hudson, G. R.	Coin counting machines	24th June, 1919
5425	Gas Traction Co.	Transmission gearing	24th June, 1919
5435	International Concentrator Co.	Dry ore concentrators	24th June, 1919
5440	Dutton, H., & Loveday, H. B. (Lawson, A. A., & Reid, G. D.)	Soldering aluminium	25th June, 1919
5441	Minchin, E. J.	Fly-proof crib for infants	25th June, 1919
5444	Bartie, W. J.	Examining eggs	25th June, 1919
5447	Wigmore, F. J.	Caskets for corpses	26th June, 1919
5448	Howie, C.	Boot protector	26th June, 1919
5450	Thwaites Bros. Ltd., & Bullock, H.	Regulating dampers for furnaces	27th June, 1918
5452	Hoffmann, O. B.	Disk ploughs	26th June, 1919
5456	de Bothezat, G.	Aeroplane	26th June, 1919
5458	Brown, J.	Supporting window curtains	26th June, 1919
5469	Adams, T. L.	Fencing dropper	27th June, 1919
5475	Burbank, A. C.	Plug valves for baths	28th June, 1919
5477	Little, J. A.	Stem guides	28th June, 1919
5478	Marsh, J. R. C.	Treating cast iron	28th June, 1919
5479	Mansell, R.	Weed cutters	28th June, 1919
5481	Carnahan, C. T.	Fluid-actuated tools	28th June, 1919
5485	McIntyre, J.	Drying milk	28th June, 1919
5489	Doyle, J. J. (Barnes, C. M.)	Fence dropper	28th June, 1919
5490	Potter, H. N.	Recovery of precious metals	28th June, 1919
5491	Plecher, A.	Telephone receiver	28th June, 1919

GEORGE TOWNSEND,
Commissioner of Patents

Printed and Published for the DEPARTMENT OF PATENTS, COMMONWEALTH OF AUSTRALIA,
by ALBERT J. MULLETT, Government Printer for the State of Victoria.

DEPARTMENT OF PATENTS.—PRICE LIST OF PUBLICATIONS.

Patents, Trade Marks, and Designs Acts are on sale at the Government Printing Offices in Sydney, Brisbane, Adelaide, Perth, and Hobart.

Printed Specifications of Inventions and Regulations under Patents, Trade Marks, and Designs Acts are on sale at the Trade Marks Sub-offices, at Commonwealth Bank Buildings, Sydney, and at the Customs Houses, Brisbane, Adelaide, Perth, and Hobart.

Publications in the following list are on sale at the Government Printing Office Melbourne:—

	Price.			Price.
Patents Act 1903	8d.	Patents Act 1909		3d.
Patents Act 1906	3d.	Patents Act 1903–1909		1s.
Patents, Trade Marks and Designs Act 1914 (No. 15)				3d.
Patents, Trade Marks and Designs Act (No. 2) 1914 (No. 16)				3d.
Patents, Trade Marks and Designs Act 1915 (No. 8)				3d
Patents Act (Partial Suspension) Act 1916 (No. 13)				3d.
Patents Regulations 1912				1s. 9d.
Statutory Rules 1914, Nos. 174, 188; 1916, Nos. 66, 220; 1919, Nos. 29, 30; 1920, No. 61			each	3d.
Commonwealth of Australia Gazettes—Patent Office Special Numbers. Nos. 34, 49, 52, 56, 60, 69, 72 of 1904; No. 2 of 1905			each	4d.
Classification of Manufactures and Word Index (edition of 1916, 280 pp.)				2s. 6d
Library Classed Catalogue, including supplement (*post free*)				1s.

THE AUSTRALIAN OFFICIAL JOURNAL OF PATENTS (*post free*)—

Weekly Numbers, published every Tuesday	each	6d.
Annual Subscription (including Volume of Statistics and Indexes)		25s.

Complete Annual Volumes—

Journals.	Indexes.	Journals.	Indexes.
...	Vol. 1, 1904	Vol. 16, 1912	Vol. 17, 1912
Vol. 2, 1905	Vol. 3, 1905	Vol. 18, 1913	Vol. 19, 1913
Vol. 4, 1906	Vol. 5, 1906	Vol. 20, 1914	Vol. 21, 1914
Vol. 6, 1907	Vol. 7, 1907	Vol. 22, 1915	Vol. 23, 1915
Vol. 8, 1908	Vol. 9, 1908	Vol. 24, 1916	Vol. 25, 1916
Vol. 10, 1909	Vol. 11, 1909	Vol. 26, 1917	Vol. 27, 1917
Vol. 12, 1910	Vol. 13, 1910	Vol. 28, 1918	Vol. 29, 1918
Vol. 14, 1911	Vol. 15, 1911	Vol. 30, 1919	Vol. 31, 1919

Vol. of Journal with corresponding Vol. of Indexes		25s
Vols. of Indexes only may be obtained at 7s. 6d. each from Vol. 1 to Vol. 17, and at 10s. each from Vol. 19 onwards		

PRINTED COPIES OF SPECIFICATIONS—

Single copies (including postage)		1s.
Parcels of 30 specifications (exclusive of postage)		20s.
Specifications of one Group as issued (up to 80 copies), subscription in advance (exclusive of postage)		40s.
Complete sets as issued (exclusive of postage)	per copy	4d.
Average weight for parcels posted:—30 specifications, 1½ lbs.; 50, 3 lbs.; 100, 4 lbs.		

THE AUSTRALIAN OFFICIAL JOURNAL OF TRADE MARKS (*post free*)—

Weekly Numbers, published every Friday	each	6d.
Annual Subscription (including Vol. of Name Index and Proceedings)		25s.
Complete Annual Volumes—Vols. 1 to 14, Applications and Proceedings.		
Name Index and Proceedings, Commonwealth and State—		
1906–7; 1908; 1909; 1910; 1911; 1912	each	7s. 6d.
1913; 1914; 1915; 1916; 1917; 1918; 1919	each	..

Constituent Particulars of Trade Marks—

Vol. 1, 1906–7	7s. 6d.	Vol. 7, 1914	7s. 6d.
Vol. 2, 1907–9	15s.	Vol. 8, 1915	7s. 6d.
Vol. 3, 1909–10	11s. 6d.	Vol. 9, 1916	7s. 6d.
Vol. 4, 1911	7s. 6d.	Vol. 10, 1917	7s. 6d.
Vol. 5, 1912	7s. 6d.	Vol. 11, 1918	7s. 6d.
Vol. 6, 1913	7s. 6d.	Vol. 12, 1919	7s. 6d.
Trade Marks Act 1905	8d.	Trade Marks Act 1905–1912	8d.
Trade Marks Act 1919 (No. 7)	3d.		
Trade Marks Regulations 1913			1s. 3d.
Trade Marks Rules—Statutory Rules 1914, Nos. 8, 175, 189; 1916, Nos. 64, 97, 221		each	3d.
Designs Act 1906	5d.	Designs Act 1912	3d.
Designs Regulations 1906			5d.
Designs Rules—Statutory Rules 1914, Nos. 176, 190; 1916, Nos. 65, 222; 1919, 228		each	3d.
Designs Indexes—1909, 1910, 1911, 1912, 1913, 1914, 1915, 1916, 1917, 1918, and 1919		each	1s.

Application Forms according to the Schedules to the Patents Act 1903-1909, Trade Marks Act 1905-1912, Designs Act 1906-1912 and the Patents, Trade Marks and Designs Act, 1914-1915, may be obtained on application at the Department of Patents, Second Floor Railway Buildings, Flinders-street, Melbourne.

NOTICE.

Sections 106 and 107 of the *Patents Act* 1903-1909 provide that—

> "106. Every person whose name is enrolled in the Register of Practitioners to be kept at the Principal Registry of the High Court or whose name is enrolled as a solicitor of the Supreme Court of a State may practise as a patent attorney without passing the prescribed examination and without being registered as a patent attorney."
>
> "107. No person shall practise or act or describe himself as a patent attorney or as a patent agent or as an agent for obtaining patents unless he is registered or entitled to practise as a patent attorney under this Act.
>
> Penalty: One hundred pounds."

Regulations 155 and 156 of the Patents Regulations 1912 provide that—

> "155. A Register shall be kept by the Commissioner for the Registration of Patent Attorneys."
>
> "156. Patent attorneys shall be entitled to prepare all documents and deeds and transact all business and proceedings for the purposes of the Act and these Regulations and the State Patents Act so far as concerns business in the Patent Office or before the Law Officer, and communications between Patent Attorneys and their clients shall be privileged to the same extent as communications between solicitor and client."

An applicant for a patent or a party to any matter before the Department of Patents may prepare the necessary documents for presentation to, and prosecute the application or matter before, the Department, but, unless experienced in these matters, he is advised to employ a competent patent attorney.

The Department of Patents does not assist in the selection of a patent attorney.

A list of registered patent attorneys, alphabetically arranged, is subjoined:—

Abell, Edward Garland, 187 Queen-street, Brisbane, Qld.

Allen, Thomas Con, Equitable Buildings, George-street, Sydney, New South Wales.

Anderson, Alexander (*Charles E. Bernays*), Fitzroy Buildings, 125 Adelaide-street, Brisbane, Queensland.

Ashton, William A., care of Clem. A. Hack, Collins House, Collins-street, Melbourne, Victoria.

Bayston, Frank (*W. S. Bayston and Son*), Market Buildings, 441 Collins-street, Melbourne, Victoria.

Bayston, Walter Smythe (*W. S. Bayston and Son*), Market Buildings, 441 Collins-street, Melbourne, Victoria.

Bernays, Charles Edwin (*Charles E. Bernays*), Fitzroy Buildings, 125 Adelaide-street, Brisbane, Queensland.

Bodycomb, George Edward, 282 High-street, St. Kilda, Victoria.

Bonnerup, Peter Madsen, care of Clement Alfred Hack, Collins House, Collins-street, Melbourne, Victoria.

Burgess, Charles Stanley, 49 William-street, Norwood, South Australia.

Callinan, Anthony James, National Mutual Buildings, 395 Collins-street, Melbourne, Victoria; and Ferry's Chambers, 14 Castlereagh-street, Sydney, New South Wales.

Collison, Arthur Gore (*Collison and Co.*), Eagle Chambers, King William-street, Adelaide, South Australia; and 483 Collins-street, Melbourne, Victoria.

Collison, Charles Nicholas (*Collison and Co.*), 483 Collins-street, Melbourne, Victoria; and Eagle Chambers, King William-street, Adelaide, South Australia.

Cooke, John Herbert, 75 King William-street, Adelaide, South Australia.

Davis, William Joseph, Bull's Chambers, 14 Moore-street, Sydney, New South Wales.

Graham, Charles Edward (*Edwd. Waters and Sons*), Culwulla Chambers, 67 Castlereagh-street, Sydney, N.S.W.; and Royal Insurance Buildings, 414-418 Collins-street, Melbourne, Victoria.

Griffith, Arthur (*Griffith and Hassel*), Record Chambers, 77 Castlereagh-street, Sydney, New South Wales.

Hack, Clement Alfred, Collins House, Collins-street, Melbourne, Victoria.

Hedges, Percy (*Hedges and Co.*), Fink's Buildings, Elizabeth and Flinders streets, Melbourne, Victoria.

Hendley, Sidney, Fink's Buildings, Elizabeth and Flinders streets, Melbourne, Victoria.

Hepburn, Charles Graham, Gladstone Chambers, 90 Pitt-street, Sydney, New South Wales.

Kelson, Victor Jasper, 17 Queen street, Melbourne, Vic.

Le Plastrier, Cecil Woods (*Phillips, Ormonde* (*Inc.*) *Pty. Ltd.*), Lombard Buildings, 17 Queen-street, Melbourne, Vic.

Madden, Augustine Thomas, 454 Collins-street, Melbourne, Victoria.

Manners, William George, corner of Maritana and Egan streets, Kalgoorlie, Western Australia.

Massey, Albert Richard William, Challis House, Martin-place, Sydney, New South Wales.

Massey, George, Post Office Chambers [illegible] reet, Sydney, New South Wales.

Michell, Anthony George Maldon, 450 C[illegible] treet, Melbourne, Victoria.

Monash, John, Collins House, 360 Collins-street, Melbourne, Victoria.

Neighbour, Arthur George Lloyd, care of Anthony James Callinan, 395 Collins-street, Melbourne, Victoria; and 14 Castlereagh-street, Sydney, New South Wales.

Newell, Percy Harwood, care of Fred Walsh, George and Wynyard streets, Sydney, New South Wales.

Newton, Perceval Manfield, Fink's Buildings, Elizabeth-street, Melbourne, Victoria; and Challis House, Martin-place, Sydney, New South Wales

Newton, William Manfield, Challis House, Martin-place, Sydney, New South Wales.

Phillips, Edwin (*Phillips, Ormonde* (*Inc.*) *Pty. Ltd.*), Lombard Buildings, 17 Queen-street, Melbourne, Victoria.

Sachse, Arthur Otto, 454 Collins-street, Melbourne Victoria.

Sigmont, Walter (*Edwd. Waters and Sons*), Royal Insurance Buildings, 414-418 Collins-street, Melbourne, Victoria and Culwulla Chambers, 67 Castlereagh-street, Sydney, New South Wales.

Smith, Hider, 95-97 Swan-street, Richmond, Melbourne, Victoria.

Sparrow, Richard, Austral Chambers, Barrack-street, Perth, Western Australia.

Spruson, Wilfred Joseph, "Daily Telegraph" Buildings, King-street, Sydney, New South Wales.

Stone, John Jasper, 30 Drummoyne-avenue, Drummoyne, Sydney, New South Wales.

Turri, George Garibaldi (*G. G. Turri and Co.*), "The Rialto," 497-499 Collins-street, Melbourne, Victoria.

U'Ren, George Albert (*Phillips, Ormonde* (*Inc.*) *Pty. Ltd.*), Lombard Buildings, 17 Queen-street, Melbourne, Victoria.

Walker, William, 156 King-street, Sydney, N.S.W.

Walsh, Fred, George and Wynyard streets, Sydney, New South Wales.

Waters, Edward (*Edwd. Waters and Sons*), Royal Insurance Buildings, 414-418 Collins-street, Melbourne, Victoria; and Culwulla Chambers, 67 Castlereagh-street, Sydney, New South Wales

608
Au7

Vol. 32.] 1920. [No. 26.

Tuesday, 13th July.

[Registered at the General Post Office, Melbourne, for transmission by post as a newspaper.]

THE

Australian Official Journal of Patents.

PRICE (including postage) :—Single Copy, 6d. Annual Subscription (including volume of Statistics and Indexes), 25s. Obtainable at the Government Printing Office, Melbourne.

By Authority:
ALBERT J. MULLETT, Government Printer, Melbourne.

C.11399.

A Personal Appeal

IF THE PEOPLE of Australia saved the sixpences, shillings, and half-crowns, which they would hardly miss from their weekly expenditure, they could easily raise £10,000,000 as a loan for Repatriation.

THEY CAN do this by investing their savings in the new issue of **War Savings Certificates,** or by joining a War Savings Group for the purpose of regularly investing their weekly contributions.

THE CERTIFICATES never fall in value. They have Australia's guarantee behind them. They can be cashed at any time at any Bank with interest added, after the first twelve months, as per scale endorsed on the Certificate.

HOW THE MONEY GROWS

12s. will make **£1** in 10 years
£6 will make **£10** in 10 years
£60 will make **£100** in 10 years
15s. 6d. will make **£1** in 5 years
£7 15s. will make **£10** in 5 years
£77 10s. will make **£100** in 5 years

War Savings Certificates

£5 3s. per cent. Compound Interest.

NOW ON SALE AT ALL BANKS AND POST OFFICES
CASHABLE AT ANY TIME AT ANY BANK

For further information write to the Secretary, Victorian War Savings Committee, 123 Queen Street, Melbourne.

The Australian Official Journal of Patents

[*Registered at the General Post Office, Melbourne, for transmission by post as a newspaper.*]

Vol. 32.] 13th JULY, 1920. [No. 26.

All communications to be addressed to the Commissioner of Patents, Railway Buildings, Melbourne, Victoria.

[The Department of Patents does not guarantee the accuracy of its publications, or undertake any responsibility for errors or omissions or their consequences.]

CONTENTS.

Notices—

Warning to the Public 931
Examination of Candidates for Registration as Patent Attorneys 932
Rule of Practice 933
Official Circulation 933

Commonwealth—

Applications Received 934
Amendments 939
Correction of Clerical Error 940
Corrigendum 940
Provisional Specifications Accepted ... 940
Application for Patent dated other than Date of Lodgment 941
Complete Specifications Lodged 941
Applications with Provisional Specifications Lapsed, Abandoned, or Withdrawn ... 943

Commonwealth—*continued.*

Applications with Complete Specifications (not open to Public Inspection) Lapsed, Refused, Abandoned, or Withdrawn ... 943
Lapsed Applications subsequently proceeded with under Patents (Temporary) Regulations, 1914 944
Specifications open to Public Inspection before Acceptance 944
Complete Specifications Accepted ... 945
Illustrated Notes 946
Commonwealth Specifications 972
Letters Patent Sealed 973
Applications in respect of which Complete Specifications have been Accepted, but on which Letters Patent have not been Sealed 976
Assignments Registered 977
Renewal Fees Paid 977
Patents Void through Non-payment of Renewal Fees 978

NOTICES.

WARNING TO THE PUBLIC.

The Public are notified that entries in the *Australian Official Journal of Patents* under the headings—

Applications with Provisional Specifications Lapsed.
Applications with Complete Specifications Lapsed.
Applications with Complete Specifications (open to public inspection) Lapsed.
Applications in respect of which Complete Specifications have been Accepted but on which Letters Patent have not been Sealed.
Patents void through non-payment of Renewal Fees.

must not be accepted as final, as under Regulations 7 and 8 of the Patents (Temporary) Regulations 1914 the Minister or the Commissioner may in certain cases defined in the Regulations extend the time prescribed by the *Patents Act* 1903–1909 for doing any act or filing any document.

The Patent Office will furnish, on request accompanied by the prescribed search fee of One Shilling, definite information, so far as possible, as to the position of any particular Application or Patent.

C.11399.

COMMONWEALTH.

PROCEEDINGS UNDER THE "PATENTS ACT 1903-1909."

List of Applications for Letters Patent received from 1st to 7th July, 1920.

The abbreviations "Prov." and "Comp." after the numbers indicate respectively that a Provisional or Complete Specification was lodged with the Application.

Thursday, 1st July.

16,351. *Prov.* THE BRITISH UNITED SHOE MACHINERY COMPANY OF AUSTRALIA PROPRIETARY LIMITED, *assignee of the act. inv.*—

"Shoe rack."

16,352. *Prov.* William James MILLINGTON—

"Re-modelling of boot lasts."

16,353. *Prov.* George Leopold Albert COATES—

"Self-acting water cock."

16,354. Maximilian Charles SCHWEINERT and Henry Phillip KRAFT.

[Date applied for under International or Intercolonial Arrangements, 21st Aug., 1915, being date of application in United States of America.]

"Combined gauge and coupling."

16,355. Maximilian Charles SCHWEINERT.

[Date applied for under International or Intercolonial Arrangements, 2nd Apr., 1919, being date of application in United States of America.]

"Improvements relating to pump couplings."

16,356. Maximilian Charles SCHWEINERT and Henry Phillip KRAFT.

[Date applied for under International or Intercolonial Arrangements, 16th Dec., 1916, being date of application in United States of America.]

"Improvements in and relating to pressure gauges."

16,357. Albert G. CRAWFORD.

[Date applied for under International or Intercolonial Arrangements, 5th Feb., 1918, being date of application in United States of America.]

"Refrigerant and process of making the same."

16,358. Albert G. CRAWFORD.

[Date applied for under International or Intercolonial Arrangements, 27th May, 1918, being date of application in United States of America.]

"Refrigerant and process of making the same."

16,359. Albert G. CRAWFORD.

[Date applied for under International or Intercolonial Arrangements, 27th May, 1918, being date of application in United States of America.]

"Refrigerant and process of making the same."

16,360. Albert G. CRAWFORD.

[Date applied for under International or Intercolonial Arrangements 5th Feb., 1918, being date of application in United States of America.]

"Refrigerant and process of making the same."

16,361. L. Clay NICOSON.

[Date applied for under International or Intercolonial Arrangements, 24th Apr., 1916, being date of application in United States of America.]

"An adjustable automobile holder."

Applications received, 1st to 7th July—*continued.*

16,362. Robert Maclaurin.

[Date applied for under International or Intercolonial Arrangements, 28th Oct., 1913, being date of application in Great Britain, No. 24,426/*13*.]

"Improvements in or relating to the manufacture or production of gas, oil and ammonia."

16,363. *Prov.* Alick Lindsay Kirkham—

"A fastener for belts, straps and the like."

16,364. *Prov.* Wallaroo-Mount Lyell Fertilisers Limited, *assignee* of Clarence Leslie Bidstrup, *act. inv.*—

"Improvements in and relating to the manufacture of sulphuric acid."

16,365. Thomas Shiels.

[Date applied for under Intercolonial Arrangements, 1st July, 1919, being date of application in New Zealand, No. 41,944.]

"Improvements in milking machine releasers."

16,366. *Prov.* William Henry Gregory Geake—

"Improvements in collar and tie fasteners."

16,367. *Prov.* Donald Stephens—

"Improvements in holders for circular shank drills."

16,368. *Prov.* Francis Alexander Graham—

"Improvements in and relating to the raising of lids or the like."

16,369. *Prov.* Henry James Dunman—

"Improvements in the manufacture of paints."

Friday, 2nd July.

16,370. *Prov.* John Christie and Francis Howard Cox—

"Improvements in relief and back pressure valves relating to oxy-acetylene welding."

16,371. *Prov.* Henry Agar—

"Improvements in and relating to outdoor games."

16,372. *Prov.* Tasman Storey—

"Improvements in expanding reamers."

16,373. Gerald Deakin.

[Date applied for under International or Intercolonial Arrangements, 26th May, 1919, being date of application in United States of America, Serial No. 299,962/*19*.]

"Telephone exchange systems."

16,374. Harold D. Arnold.

[Date applied for under International or Intercolonial Arrangements, 28th Mar., 1919, being date of application in United States of America, Serial No. 285,857/*19*.]

"Improvements in or relating to amplifying systems."

16,375. *Prov.* Frederick Roberts and Albert Hall—

"Ore smelting infusible kiln or furnace lining."

16,376. *Prov.* John Alexander Reid—

"An improved bridle."

16,377. *Prov.* William Joseph Hamilton—

"An improved container or case and method of and apparatus for manufacturing the same."

16,378. James Cavanagh.

[Date applied for under International or Intercolonial Arrangements, 9th Dec., 1914, being date of application in United States of America.]

"Methods of making shoes."

16,379. Grover Cleveland Hauser and John Henry Dolan.

[Date applied for under International or Intercolonial Arrangements, 8th Sept., 1917, being date of application in United States of America, No. 1,261,524.]

"Improvements in footwear."

16,380. Harry Havelock Beckwith.

[Date applied for under International or Intercolonial Arrangements, 28th July, 1915, being date of application in United States of America, Serial No. 42,330/*15*.]

"Improvements in shoe stiffeners."

Applications received, 1st to 7th July—*continued.*

16,381. Harry Havelock Beckwith.

[Date applied for under International or Intercolonial Arrangements, 15th June, 1914, being date of application in United States of America, No. 1,124,835.]

"Improvements in stiffened shoe blanks."

16,382. Hiram Holden.

[Date applied for under International or Intercolonial Arrangements, 1st Aug., 1914, being date of application in United States of America, Serial No. 854,517/*14*.]

"Improvements in eyeleting machines."

16,383. Eugene Morris Butterfield, *administrator of* Frank Ellsworth Butterfield, *deceased.*

[Date applied for under International or Intercolonial Arrangements, 2nd Aug., 1913, being date of application in United States of America.]

"Improvements in box toes and blanks therefor."

16,384. Frank Edward Elmore.

[Date applied for under International or Intercolonial Arrangements, 23rd June, 1919, being date of application in Great Britain, No. 15,783/*19*.]

"Improvements in the treatment of argentiferous sulphide ores."

16,385. *Prov.* Richard Henry Ebsworth—

"Means for indicating the water level in the radiator of a water cooled internal combustion engine."

16,386. *Prov.* Stanley Fremantle Mort—

"Improved cross-section clinometer."

16,387. *Prov.* Simon Hickey—

"Automatic alarm."

16,388. *Prov.* William Berry—

"Improved merchandise display stand."

16,389. *Comp.* Henry Meister—

"Improvements in milk and cream cans."

16,390. *Prov.* Tasman Storey—

"Improvements in self-closing faucets."

Saturday, 3rd July.

16,391. *Prov.* Florence May Jones—

"Improved cheese cutter."

16,392. *Prov.* Thomas Gordon—

"Rear drive chassis for motor cycles."

16,393. *Prov.* Russell Tucker and James Duncan Hall—

"Improved sanitary receptacle."

16,394. Peter Thomson.

[Date applied for under Intercolonial Arrangements, 11th Apr., 1919, being date of application in New Zealand, No. 41,561.]

"An improved lid and handle for kerosene tins and the like."

16,395. *Comp.* Alexander Eleazer Block—

"Improvements in supports for the anterior metatarsal arch of the foot."

16,396. *Comp.* Alexander Eleazer Block—

"An improved combined heel and arch-support."

16,397. *Comp.* Henry James Lee—

"Improvement in locking devices."

16,398. *Prov.* Cecil Edward Christie and Thomas Douglas Stewart Gardiner—

"Improvements in and relating to paints."

16,399. George Batty.

[Date applied for under International or Intercolonial Arrangements, 22nd Oct., 1919, being date of application in Great Britain, No. 25,940/*19*.]

"Improvements in the method of casting ingots of steal and other metals."

16,400. *Prov.* John Graeme Balsillie—

"Improvements in light projectors adapted for headlamps of vehicles."

16,401. *Prov.* John Graeme Balsillie—

"Improvements in reflectors for use in light projectors."

Applications received, 1st to 7th July—*continued.*

Monday, 5th July.

16,402. *Prov.* Albert Sydney Gillies—

"Process for the conversion of crude gum into high grade varnish or lacquer."

16,403. *Comp.* Walter John Sachs—

"Improvements in the construction of stoves."

16,404. *Prov.* Maurice Kaye Williamson—

"Improved crank shaft and piston mechanism."

16,405. *Prov.* Oliver Miles—

"Method of and means for modifying the sounds given off by a gramophone or similar instrument."

16,406. *Prov.* Henry Edwin McDonald—

"Improved detachable carrying handle for handbags and the like."

16,407. *Prov.* John Murray and Ebenezer Reid—

"Clothes drainer and carrier."

16,408. *Prov.* Rupert Uriah Hoddinott—

"Device for preventing clothes props from slipping."

16,409. *Prov.* Benjamin Lee—

"Improvements in and relating to spokes of metal wheels."

16,410. *Prov.* Gregor Robertson—

"Improved method of and means for trapping dogs, dingos, foxes and other animals in numbers."

16,411. *Prov.* George Andrew—

"Improvements in vehicle tyre motor car and other vehicle wheels."

16,412. Automatic Telephone Manufacturing Company Limited and Alfred Ernest Hudd.

[Date applied for under International or Intercolonial Arrangements, 16th Aug., 1919, being date of application in Great Britain, No. 20,193/*19*.]

"Improvements in or relating to motors."

16,413. Louis Carroll Stukenborg.

[Date applied for under International or Intercolonial Arrangements, 21st Apr., 1917, being date of application in United States of America.]

"Improvements in cotton pickers."

16,414. *Prov.* Frederick Clark—

"Improvements in self folding sheets for posting."

16,415. Axel Franck-Philipson.

[Date applied for under International or Intercolonial Arrangements, 15th Mar., 1918, being date of application in United States of America, No. 1,282,062.]

"Solidified soluble coal-tar-derivative disinfectant."

16,416. *Prov.* Frederick Hutchison Monteath—

"A device to allow a necktie to pull easily through a folding collar."

16,417. Albert Wallace Hull.

[Date applied for under International or Intercolonial Arrangements, 5th July, 1919, being date of application in United States of America.]

"Electron discharge."

16,418. *Comp.* Charles Victor McKenzie—

"An improved method of forming the rims of woven straw hats."

16,419. *Prov.* Robert Dossor—

"Improvements in the mode of and means for distributing illumination."

16,420. *Prov.* Ronald Southerland Murray Mitchell, *assignee of* Franklin George Barnes, *act. inv.*—

"Improvements in and relating to electric signs, for displaying advertisements and the like."

16,421. Hendrik Arie Tempelaar.

[Date applied for under International or Intercolonial Arrangements, 10th Mar., 1916, being date of application in the Netherlands.]

"Apparatus for drying tea and similar materials."

Applications received, 1st to 7th July—*continued.*

16,422. Hendrik Arie TEMPELAAR.

[Date applied for under International or Intercolonial Arrangements, 10th Mar., 1916, being date of application in the Netherlands.]

"Tea leaf rolling machine."

16,423. *Comp.* Charles Hammond DEMPSTER—

"Improvements in shaving soap sticks."

Tuesday, 6th July.

16,424. *Comp.* Mabel Helen DRAKE—

"Improvements in wearing apparel."

16,425. *Prov.* Archie Robert GORDON, *assignee of* Thomas James PRYOR, *act. inv.*—

"An improved wrench or spanner."

16,426. *Comp.* Joseph BETHENOD—

"Improvements in devices for the measuring of high frequency electrical currents."

16,427. *Prov.* James Guthrie McEWIN—

"A system for the safe and economical storage and handling of inflammable substances or of substances developing inflammable gases or vapours."

16,428. *Prov.* Edward William CROSIER and Charles Sankey FRASER—

"A device for use after the operation of cataract extraction and in such other cases where the seeing is done with one eye only."

16,429. *Prov.* Herbert Henry BRUHN—

"A peg-hanger for suspending dishes."

16,430. A. REYROLLE & COMPANY LIMITED, Frank COATES, and James MIRREY.

[Date applied for under International or Intercolonial Arrangements, 18th Jan., 1918, being date of application in Great Britain, No. 122,443.]

"Improvements in or relating to earthing devices for electric oil-break switches."

16,431. Henry William CLOTHIER and A. REYROLLE & COMPANY LIMITED.

[Date applied for under International or Intercolonial Arrangements, 15th Nov., 1916, being date of application in Great Britain, No. 110,808.]

"Improvements in or connected with electric switch gear."

16,432. *Prov.* DAVIS, BROWNE LIMITED, *assignee of* Percival Henry MARRIOTT, *act. inv.*—

"A tool for the manufacture of wire wall ties (case A)."

16,433. *Prov.* DAVIS, BROWNE LIMITED, *assignee of* Percival Henry MARRIOTT, *act. inv.*—

"A tool for the manufacture of wire wall ties (case B)."

16,434. *Prov.* Ernest CANNING—

"Improvements in paper setting yokes in typewriting machines."

16,435. *Prov.* Duncan McKENZIE—

"An improved self filling fountain pen."

16,436. *Prov.* Frederick WILLIAM SPENCER—

"Improvements relating to the production of anhydrous ammonia."

16,437. *Prov.* Edward MAURICE—

"Improvements relating to means for preventing the unauthorized use or theft of motor cycles."

16,438. Henry FORD.

[Date applied for under International or Intercolonial Arrangements, 10th July, 1918, being date of application in United States of America.]

"Improvement in fan construction."

16,439. *Comp.* Ernst Waldemar JUNGNER—

"Improvements in primary galvanic batteries."

Applications received, 1st to 7th July—*continued.*

16,440. Société du Carburateur Zenith.

[Date applied for under International or Intercolonial Arrangements, 25th Nov., 1915, being date of application in France, No. 502,637.]

"Improvements in or relating to carburetters for internal combustion engines."

16,441. Société du Carburateur Zenith.

[Date applied for under International or Intercolonial Arrangements, 31st Dec., 1915, being date of application in France, No. 492,775.]

"Improvements in or relating to carburetters for internal combustion engines."

16,442. Société du Carburateur Zenith.

[Date applied for under International or Intercolonial Arrangements, 10th Aug., 1916, being date of application in France, No. 503,998.]

"Improvements in or relating to carburetters for internal combustion engines."

16,443. *Prov.* Prosper Amos Bracewell—

"Improvements in signalling attachments for motor cars and the like."

16,444. *Prov.* Prosper Amos Bracewell—

"Improvements in long handled brooms and like implements."

16,445. *Prov.* Leonard Charles Russell and Leslie Allan Bowler—

"Improvements in and relating to valve gear of internal combustion engines."

Wednesday, 7th July.

16,446. *Prov.* Norman Lean—

"Combination bottle opener."

16,447. *Prov.* William Stenhouse Henderson—

"Improvements relating to the manufacture of leaf springs."

16,448. *Prov.* David Wright, *act. inv.*, and Albert Herbert Thompson, *assignee*—

"Improvements in hand rakes."

16,449. Richard Lebenhart.

[Date applied for under International or Intercolonial Arrangements, 12th June, 1914, being date of application in Germany.]

"Improvements in and relating to spring buttons."

16,450. *Prov.* Thomas Glensor—

"Improvements in fuel economisers for internal combustion engines."

16,451. *Prov.* James Ferdinand Hellings—

"Improvements in and relating to flying machines."

16,452. *Prov.* John Oliver-Clayton—

"Rigid match holder."

16,453. *Comp.* Robert Stephen Walker.

[Application for Patent of Addition to No. 13,964/*20*.]

"Method of and means for burning pulverulent fuels."

16,454. *Prov.* Cedric Biddulph Henning—

"Improvements in concrete construction."

16,455. *Prov.* Moore Getty—

"Improved oil burner."

Amendments.

1920.

14,373. 13 Feb. Name of applicant amended *to read* Warren Frederick Flesselles in lieu of William Frederick Floessell. (See p. 202, Vol. 32.)

14,374. 13 Feb. Name of applicant amended *to read* Warren Frederick Flesselles in lieu of William Frederick Floessell. (See p. 202, Vol. 32.)

Correction of Clerical Error.

1919.

In Vol. 30, No. 33, p. 878, under heading "Applications Received," *for* 12,286. *Comp.* Jacques BEINENFELD *read* 12,286. *Comp.* Jacques BIENENFELD.

Corrigendum.

1920.

In Vol. 32, No. 1, p. 7, under heading "Applications Received," *for* 13,895. Arthur Ernest HEATH, &c., *read*—

13,895. Arthur Ernest HEATH.

[Date applied for under International or Intercolonial Arrangements, 15th Oct., 1918, being date of application in Great Britain, No. 133,766.]

"Improvements in sparking plugs for ignition purposes."

Provisional Specifications Accepted.

Names in parentheses indicate actual inventors, &c., who are not applicants Italics indicate that some amendment has been made.

1920.

14,022. Day, A. C. *Improvements in and relating to electrical switches, and the like.*
14,088. Churchill-Shann, M. Locomotive boiler.
14,308. Taylor, D. R. N., & Marks, D. *Improvements in and relating to crutches.*
14,455. Churchill-Shann, M. Boiler.
14,605. Kline, W. A. *Improved toy racehorse.*
14,620. Healy, M. H. *An improved apparatus for race games.*
15,096. Hancock, O. J. *An improved means for attaching handles to brooms and the like.*
15,215. Roche, R. J. Bale fastener.
15,297. Thorp, S. H. Blouse belt.
15,448. Peacock, J. A. Concentrating auriferous material.
15,462. Brown, C. R. Match.
15,527. Stacey, T. Tyre protector.
15,534. Coles, F. J. Ticket dating.
15,571. Brown, G. M. Motor tyre.
15,718. McGuinness, D. H. K. (Givens, H.). Tyre cover.
15,730. Williams, W. Lifting-jack.
15,735. Fleming, R. R. Machine saw.
15,811. Stevens, E. S. Steam generating.
15,834. Ebsworth, R. H. Priming combustion engine.
15,845. Swans Ltd. (Bird, A. E.). Combustion engine valve.
15,853. MacDonald, J. D. Gas meter.

Provisional Specifications Accepted—*continued.*

1920.

15,854. Nicol, V. B. Combustion engine vaporizer.
15,855. Nicol, V. B. Combustion engine fuel mixing.
15,858. Sheehan, M. J. Pouring liquid.
15,859. Larsen, H. A., & Clarke, W. F. Cane juice sampler.
15,882. Mann, R. N. Conduit bush manufacture.
15,883. Loveday, W. H. N. Vehicle wheel.
15,888. Goldfinch, W. H. Vehicle spring.
15,889. Knight, L. B. Seed drill.
15,890. Knight, L. B. Spark arrester.
15,892. Henning, C. B. Concrete construction.
15,895. Hatch, W. L. Knife cleaning.
15,898. Hewlett, S. C. Cosy.
15,905. Duncalfe, A. G., & Osborne, A. B. Joining band bolts.
15,906. Roots, R. W. Oil filter.
15,912. Withycombe, R. M. Artificial dentures.
15,928. Batchelor, C. N. Calf feeding.
15,929. Dunstan, W. Non-skid cover for pneumatic tyres.
15,933. Lawler, W. Cistern flush.
15,934. Withycombe, R. M. Toothpick.
15,935. Hyde, F. Drilling machine.
15,936. Bauert, W. H. Pipe coupling.
15,943. Holland, F. E. (Holland E.). Plough.
15,944. Johnson, J. J., & Richardson, J. B. Chaff-cutter.
15,955. Charley, W. G., & Day, W. F. Generating power.
15,992. Morrison, W. Boot heel.
16,020. Geake, W. H. G. Compressing air.

Application for Patent dated other than Date of Lodgment.

1920.

15,215. Roche, R. J.

[Application post-dated to 24th May, 1920.]

Complete Specifications lodged after Provisional Specifications.

Complete Specifications under Section 63A have their Cognate Provisionals indicated in brackets. The date following the title is that on which the Complete Specification was lodged.

1919.

10,722. [14,308/*20.*] Donald Robert Napier Taylor and David Marks—

"Improvements in and relating to crutches." 9th Feb., 1920.

12,326. Louis Grand Broel—

"Improvements in window display brackets and fittings." 30th June, 1920.

12,332. Stanley Eric Speare—

"An improved brooder." 30th June, 1920.

12,333. Stanley Eric Speare—

"Improvement in conoidal furnaces especially for the heating of incubators brooders and the like." 30th June, 1920.

12,432. Julius von Bertouch—

"An improved composition of material for the manufacture of pavements, walls, ceilings; tiles for roofing, flooring and walls; tiles and slabs for furniture; mantelpieces; crockery and pottery." 5th July, 1920.

Complete Specifications lodged after Provisional Specifications—*continued.*

1919.

12,469. John Robert Woodman HYDE—

"An improved fire escape." 15th June, 1920.

12,706. ALCOCK AND COMPANY PROPRIETARY LIMITED, *assignee of* Percy Montague MIDDLETON, *act. inv.*—

"An improved billiard table pocket." 30th June, 1920.

12,711. [13,652.] Henry William HOARSE—

"Improvements in and relating to cylinder block reamers." 1st July, 1920.

12,779. Abraham NEWMARK—

"An improved machine for destroying prickly pear or like growths." 30th June, 1920.

12,789. Robert CLINTON—

"Improved windmill wheel." 30th June, 1920.

12,902. Charles VAIL—

"An improved pin for connecting the tips or ends of soft collars." 6th July, 1920.

12,945. John HEINE, jun.—

"Automatic multi-spindle can heading and sealing machine." 5th July, 1920.

12,954. LIGHTING SUPPLIES PROPRIETARY LIMITED, *assignee of* Seymour Ernest EVANS, *act. inv.*—

"Improvements relating to the support of incandescent burner enclosures." 5th July, 1920.

13,240. Thomas Theophilus DRAPER—

"Apparatus for use in the moulding and erection of concrete building walls or slabs." 30th June, 1920.

13,381. [13,590; 14,934/*20.*] Henry Charles Frank MORANT—

"Improved film developing apparatus." 3rd July, 1920.

13,466. John TAYLOR and Edmund Alfred WILSON—

"A machine for the purpose of measuring and delivering a desired quantity of meat to another machine used for stuffing cans in meat preserving works." 6th July, 1920.

13,636. Frederick Charles BROWN, trading as F. C. BROWN & Co.—

"Improvements in building construction." 5th July, 1920.

13,769. John Henry HERMAN—

"Improvements in sockets for connecting cables to the bits of percussion, drilling or boring plants." 29th June, 1920.

13,770. John Henry HERMAN—

"Improved expansion percussion bit for drilling or boring operations." 29th June, 1920.

13,771. John Henry HERMAN—

"Improvements in fishing tools for use with well boring apparatus." 29th June, 1920.

1920.

14,244. James Alexander GARDEN—

"Improvements in sprinklers and the like." 30th June, 1920.

14,418. [14,461.] John Alister EWING—

"Improved coal briquette and process therefor." 3rd July, 1920.

Applications with Provisional Specifications Lapsed, Abandoned, or Withdrawn.

Names in parentheses indicate actual inventors, &c., who are not applicants.

1919.

Lapsed.

12,307. Quin, R., & Doyle, J. J.
12,308. Howarth, J. F. H.
12,309. Adams, J. G.
12,310. Webster, F. W.
12,316. Starkey, F. W.
12,318. Amadio, H. H.
12,319. Bryan, J. E.
12,320. Bryan, J. E.
12,321. Hume, E. J.
12,322. Smith, A. F., & Dunn, G. V. S.
12,323. Burne, E. W.
12,325. Holderness, W. C., & Taylor, A. A W.
12,327. McGuire, P.
12,329. Crosbie, R. G.
12,330. Paine, H. R.
12,331. Mason, F. C.
12,334. Goodin, S. L., & Owens, D.
12,335. Lieschke, F. C.
12,336. Hocking, H., & Hunter, E.
12,337. Newcombe, W. H.
12,339. Tyree, W.
12,340. Lewis, O. J.
12,343. Quinn, J.
12,346. Brown, A. J., Hayes, A., & Ward, H.
12,347. Walker, J. F., & Bowen, D. C.
12,348. Sadler, W., & Jeffery, H. W.
12,356. Morrissey, M. V.
12,357. Overall, H. J. R., & Chinnery, A. W.
12,358. Haines, W. C.
12,359. Humphrys, F. A.
12,360. Maddern, C. B.
12,367. Stevens, S. T.
12,382. Leigh, Dorothy F.
12,402. Walker, H. R.
12,403. Jeffrey, C. S.
12,409. Benton, J. W.
12,411. de Jetley-Marks, J. G.
12,414. Christie, J.; Catterall, J. B., & Miller, H. J.

Abandoned.

12,881. Hastwell, A. J.

Applications with Complete Specifications (not open to Public Inspection) Lapsed, Refused, Abandoned, or Withdrawn.

Complete Specifications under Section 63A have their Cognate Provisionals indicated in brackets. Names in parentheses indicate actual inventors, &c., who are not applicants.

Lapsed.

1918.

8885. Weseloh, L. R.

1919.

10,627. Sté. Anonyme des Etablissements Belin (Baron, Marie J.)
10,648. Green, O. B.
10,649. E. Barbet & Fils & Cie (Barbet, E. A.)
10,650. E. Barbet & Fils & Cie (Barbet, E. A.)
10,651. E. Barbet & Fils & Cie (Barbet, E. A.)

Withdrawn.

11,800. Hartridge, E. C., & Mitchell, A. C.

Lapsed Applications subsequently proceeded with under Patents (Temporary) Regulations, 1914.

Complete Specifications under Section 63A have their cognate Provisionals indicated in brackets.

1915.

15,710. Aktiebolaget Centrali, *assignee of* Lars August Peterson, *act. inv.*—

"Improvements in change speed gearing."

[Advertised as Lapsed in *Journal* of 20th June, 1916.]

Specifications open to Public Inspection before Acceptance,

UNDER SECS. 121 AND 122, "PATENTS ACT 1903-1909."

The specifications may be inspected at the Patent Office, Melbourne, on payment of the search fee of One Shilling in respect of each Application.

Typed copies of specifications will be supplied at Sixpence per 100 words (minimum charge, One Shilling).

Sun prints of drawings will be supplied at One Shilling per foolscap folio sheet (8 inches x 13 inches).

Fees must be tendered in cash or postal note or in money order, payable to the Commissioner of Patents, Melbourne.

1919.

11,470. Apolline Rialland, *née* Percevault.

[Date applied for under International or Intercolonial Arrangements, 10th Dec., 1917, being date of application in France; open to public inspection 3rd July, 1920.]

"Improved process for purifying liquids."

1920.

14,229. Arnold Telford Mason.

[Date applied for under International or Intercolonial Arrangements, 7th May, 1919, being date or application in Great Britain, No. 11,384/*19*; open to public inspection 8th May, 1920.]

"Improvements in or relating to books."

15,967. Peter Pendleton Eckersley.

[Date applied for under International or Intercolonial Arrangements, 4th Apr., 1919, being date of application in Great Britain, No. 8563/*19*; open to public inspection 5th July, 1920.]

"Improvements in switch gear for electromagnetic wave transmission and reception systems."

Complete Specifications Accepted.

Open to Public Inspection at the Patent Office, Melbourne.

Search or Inspection Fee—One Shilling each.

Notice is hereby given that all persons interested in opposing the grant of a Patent on any one of the following applications, may at any time within three months from the date of this Journal, or within such further time not exceeding one month as may on application made within such three months be allowed, give notice at the Patent Office, in Form G, which must be accompanied by the fee of £2, tendered in cash or postal note or in money order.

Within fourteen days after the lodging of the notice of opposition, or within such further time as the Commissioner allows, the opponent shall leave at the Patent Office declarations and copies thereof in support of his opposition, and forthwith after the receipt thereof the copies shall be transmitted by the Commissioner to the applicant.

Failure by an opponent to lodge declarations shall be deemed intentional abandonment of the opposition.

1915.

15,710. Aktiebolaget Centrali (Peterson). Change speed gearing.

1917.

5239. Roxburgh, Sanderson & Sanderson. Manufacture of charcoal.

1918.

6946. Greenwood. Ammonia synthesis.
6947. Greenwood. Ammonia synthesis.
8395. Muir's Pty. Ltd. (Glynn). Horse-nail machine.
8936. Nitrogen Products & Carbide Co. Ltd. (Perkin). Destructive distillation.

1919.

9718. Thorssell & Lundén. Production of nitrates.
10,259. Woodhouse. Centrifugal friction clutch.
10,549. Aktiebolaget Ljungströms Angturbin (Ljungström). Locomotive condenser.
10,632. Cameron. Refrigerating compressor.
10,722. Taylor & Marks. *Improvements in and relating to crutches.*
10,977. Western Electric Co. Ltd. (Heising). Radio signalling system.
11,184. Farquhar & Hill. Automatic fire-arm.
11,204. Lymn & Rambush. Gas-producer.
11,351. W. & T. Avery Ltd. (Mitchell & Parnall). Weighing travelling crane.
11,605. Jelfs & Myles. Folding chair.
11,620. McGrath & Milford. Composition.
11,631. Mintern & Brehaut. Delivery tube for drill.
11,664. Parker. Extra air valve.
11,665. Abbott. Butter cooler.
11,678. O'Brien & Morse. Brake for horse vehicle.
11,788. Denton Hats Ltd. & Ashworth. Felt hats.
11,838. Sulman & Ballantine. Manufacture of alloys.
11,971. Crawford & Taylor. Automatic pistol.
12,007. Heimann. Automatic weighing machine.
12,039. Allan. Fractional condensation.
12,229. Automatic Electric Co. (Wicks). Automatic telephone system.
12,271. The British Westinghouse Electric & Mfg. Co. Ltd. (Guy). Steam turbine.
12,284. Nicolai. Medicated pad.
12,437. Carrette. Screwing device.
12,522. Pedler. Cycle rim-brake.
12,600. Browne. *An improved mouthpiece for teat cups.*
12,654. Ellis & Sawtell. Toy gun.
12,721. Western Electric Co. Ltd. (Blackwell & Baldwin). Telephone transmission system.
12,778. Hiscock. Wire strainer.
12,946. Welsh. Tonneau wind shield.
12,949. Tegel. Concrete wall moulds.
13,012. Hoke. Making length gauges.
13,140. McClellan. Journal bearings for compressors.
13,176. Leech. Oscillating valve.
13,258. Snelling. Extra tyre carrier.
13,322. Benard. Aerial navigation light.
13,380. Shunichiro Midzushima. Pneumatic tyre.
13,485. Clews. Lifting jack.

Complete Specifications Accepted—*continued.*

1920.

13,874. Ross. Headlight glare screen.
13,904. Automatic Electric Co. (Smith). Voice current repeater.
14,004. Automatic Electric Co. (Jacobsen). Party line call registering.
14,008. Drew & Drew. Sheet metal wheel.
14,140. Firth. Gas-producer.
14,152. Tonkin & Evans. Moulding machine.
14,153. Walker. Tanning.
14,229. Mason. Book.
14,273. Ray. Oil burner.
14,298. Hammett. Locating engine knocks
14,310. Durham Duplex Razor Co. (Sheehan). Safety razor.
14,706. Blue Bird Mfg. Co. (Ireland). Clothes wringer support.

NOTE.—THE SURNAMES IN PARENTHESES INDICATE ACTUAL INVENTORS (OR OTHER INTERESTED PARTIES) WHO ARE NOT APPLICANTS. ITALICS INDICATE THAT SOME AMENDMENT HAS BEEN MADE.

Further information of the inventions in the above Specifications is given in the following Illustrated Notes, and the full particulars of names, addresses, and occupation or calling of persons concerned in each application are stated in the Printed Specifications.

Printed copies of the above Specifications may now be ordered from the Government Printer, Melbourne, price One Shilling each, post free for cash or postal note ; the copies will be posted from Melbourne two weeks after the date of this Journal, when copies will also be forwarded to the Trade Marks Sub-offices, at the Commonwealth Bank Buildings, Sydney, and at the Customs Houses, Brisbane, Adelaide, Perth, and Hobart, for sale on demand.

A list of Australian and Foreign Offices and Libraries at which the Printed Specifications are placed for free public inspection is given in the first Journal of each quarter.

Illustrated Notes

TO THE FOREGOING ACCEPTED COMPLETE SPECIFICATIONS.

The class numbers refer to similar inventions comprised in the Classified Subject Matter Indexes.

1915.

15,710. 10 Mar. AKTIEBOLAGET CENTRALI, *assignee of* L. A. PETERSON, *act. inr.*, Sweden.

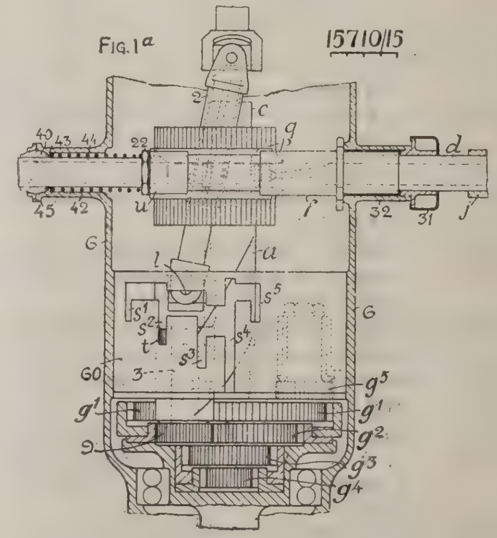
Classes 60.2 ; 95.9.

Change Speed Gearing.

A change speed gearing in which a telescopic shaft **2** is mounted in a swingable and slidable support **a** moved to one side or the other by a rack **p** which engages a sector **q** fixed on a boss **b**, attached to the support **a** and rotatable about a fixed shaft **c**. When the transverse shaft **d** is slid endways, the pinion **9** is brought into and out of engagement with coaxial gears **g1** to **g4**.

The sector **q** has a wide opening for the telescopic shaft **2**, which is connected to the shaft **3** of the pinion **9** by a universal joint **l**. The shaft **d** may be tubular so as to serve as a bearing for another shaft, adapted to operate a brake.

The pinion 9 is fixed to the shaft **3** by means of a bolt passed through the pinion to the inner end of the shaft 3 and provided with a head which is slotted to engage with keys fitting into slots in the pinion and shaft. In a modification the bolt is reversed and screwed into a slotted plate which takes the place of the bolt head, a spring lock-ring being used to prevent unscrewing.



9 figures, 6 claims.

Illustrated Notes—*continued.*

1917.

5239. 20 Sept. A. B. Roxburgh, *act. inv.*, and T. and F. H. Sanderson, *assignees*, England.

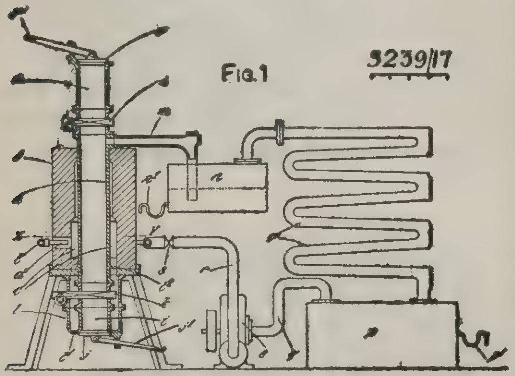
Classes 20.2; 16.2.

Manufacture of Charcoal.

To more efficiently distil and carbonize wood in the production of charcoal and residues, such as wood tar and vinegar, the wood is caused to descend by gravity through an externally heated air-tight retort, the charcoal being cooled and removed at intervals from the bottom.

Wood is admitted through a feed hopper **f** and valve **h** to a vertical retort **a**, having a fire chamber fitted with gas burners **d**, and is gradually heated till the maximum is reached at **c**. For cooling purposes, the charcoal is admitted to an air-cooled chamber **i** or is quenched by water or steam injected at the bottom of the retort.

Tar and wood vinegar given off are collected in tanks **n** and **p** and the gases are fed by a pump **e** to the burners **d**.



2 figures, 10 claims.

1918.

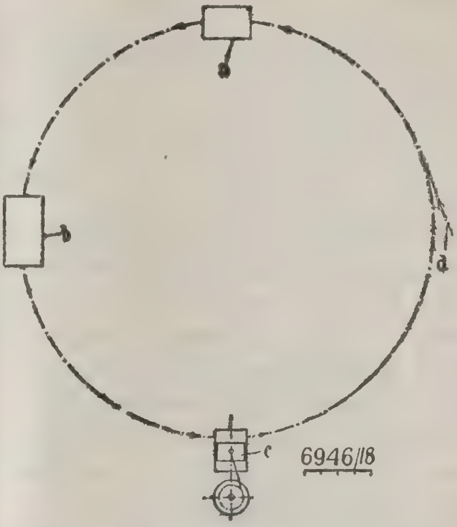
6946. 3 Apr. H. C. Greenwood, Eng.

Class 08.5.

Ammonia Synthesis.

To increase the space-time yields of ammonia in the synthesis of that material, the gases are passed through the catalyst at a very high velocity.

The converter **a** is supplied with gas from the inlet **d** and the gas is forced forward by the pump **c**, the converted material being taken out by the ammonia remover **b**. The circulation is so arranged that the gases are passed through the catalyst in the order of a million litres per hour per litre of catalyst space.



1 figure, 4 claims.

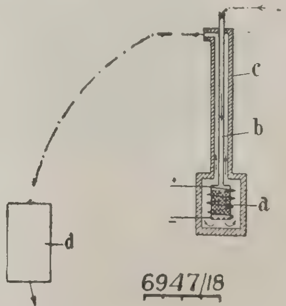
6947. 3 Apr. H. C. Greenwood, Eng.

Class 08.5.

Ammonia Synthesis.

To increase the effectiveness of the heat exchange in the synthesis of ammonia, the gas in one or both tubes of the exchanger is passed through at a velocity above the "critical velocity" of the gas for that tube.

The tube **b** leading to the catalyst **a** is so proportioned that turbulent motion is set up therein so that a more efficient exchange of heat takes place from the gas passing out through the tube **c**.



1 figure, 3 claims.

Illustrated Notes—*continued.*

8395. 21 Aug. MUIR'S PROPRIETARY LIMITED, *assignee of* D. F. GLYNN, *act. inv.*, Victoria.

Sec. 63A. Including cognate No. 11,066/*19*.

Class 58,4.

Horse-nail Machine.

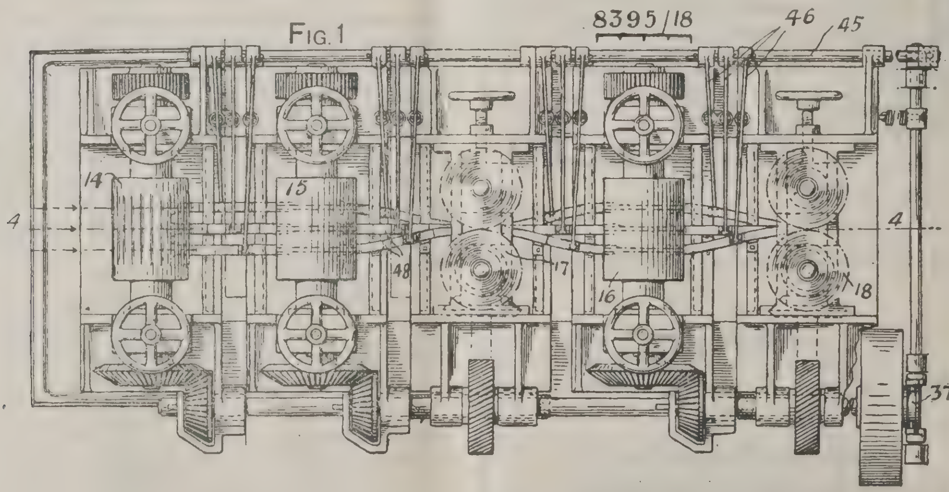
To automatically form horse-nails from previously heated and forged wire rods, by cold working, a number of rods are fed by rollers 14 through a series of forming rolls 15, 17, 16 and 18, adapted to compress and elongate predetermined portions of each of the recurrent shapes into which the rods are formed, the latter emerging in the form of a chain of lightly connected blanks.

Guides 48 are provided with covers hinged to rocker arms 46, whereby the feed shaft 45 is partially rotated to release the clutch 37 when an obstruction in the feed takes place. The blanks are removed from the rolls by cam-actuated plungers and pass to a cutting-off machine.

In modifications, the heading may be effected after the cutting off, and feeding mechanism comprising a cam and lever-actuated vice, and straightening rolls may be provided. In further modifications, all of the pairs of rolls may be arranged horizontally and the guides helically or single rolls may be arranged above a horizontal work table for dealing with strip metal.

Provisional Specification 8395/*18* also describes means for cooling the blanks. Provisional Specification 11,066/*19* also describes an electro-magnetic de-clutching device.

FIG. 1



41 figures, 30 claims.

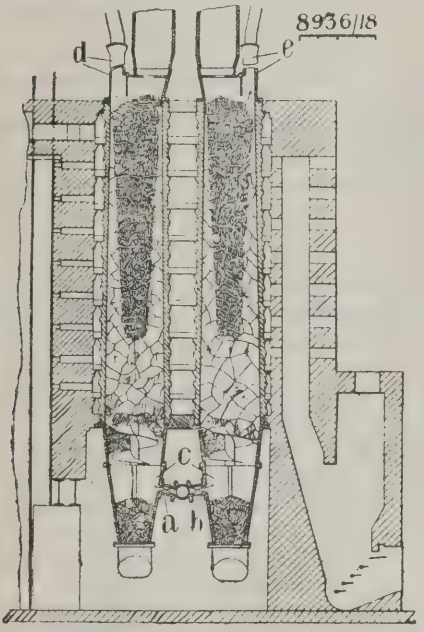
Illustrated Notes—*continued.*

8936. 12 Oct. Nitrogen Products and Carbide Company Limited, *assignee of* F. M. Perkin, *act. inv.*, England.

Classes 20.6 ; 07.9 ; 21.1.

Destructive Distillation.

To increase the benzol content of the tar, in the destructive distillation of carbonaceous materials where an inert gas is passed through the retort, acetylene is mixed with the gas and passed into the retorts through the pipes **a, b.**



1 figure, 3 claims.

1919.

9718. 2 Jan. C. T. Thorssell and H. L. R. Lundén, Sweden.

Class 09.9.

Production of Nitrates.

To prevent the formation of moulds or other enemies of nitrificating bacteria, poisons, such as salts of copper, rhodanides, cyanides or phenol, are added to the liquid of nutriment in the form of insoluble salts. If soluble, salts of low concentration are used so that the finished articles will not contain impurities.

No drawing, 3 claims.

10,259. 1 Mar. A. E. Woodhouse, England.

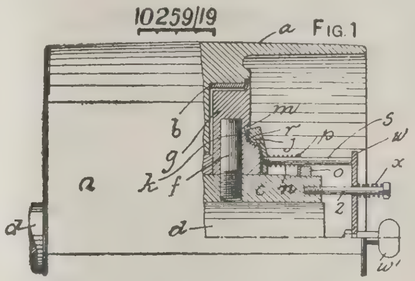
Date applied for under International or Intercolonial Arrangements, 18th Jan., 1918, Great Britain, No. 1054/*18.*

Class 62.7.

Centrifugal Friction Clutch.

A clutch in which the friction blocks **g** are held free of the face **b**, until the load has attained a predetermined speed, by a number of springs **n** and **x** coacting with a disk **j**, which has an inclined face **r**, a handle **w**¹ being provided for manually relieving the pressure of the springs **x**.

In modifications, the handle **w**¹ is used to relieve the springs **n** also.



4 figures, 10 claims.

10,632. 1 Apr. T. G. Cameron, Qld.

Classes 69.4 ; 29.4.

Refrigerating Compressor.

To increase the efficiency of an ammonia compressor, the cylinder is provided with supplementary admission ports **F** leading from an annular chamber **E** into which the comparatively high pressure gas of the chilling system is discharged by a pipe **G** to raise the pressure of the gas drawn into the cylinder from the low pressure pipe **B** connected to the freezing system.

The suction pipes **B** and **G** may be connected together by a pipe **H** with a valve **J**, and, in a double-acting compressor, the chamber **E** and ports **F** are situated midway between the cylinder ends, each of which is

[*Continued next page.*

Illustrated Notes—*continued.*

fitted with suction and delivery valves **D** and **D**¹.

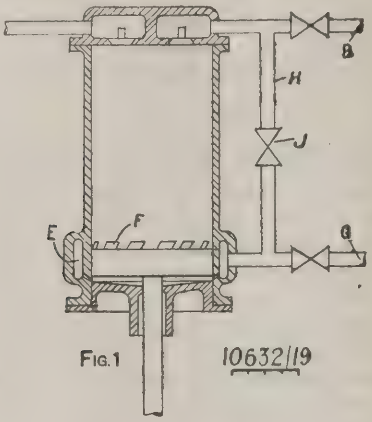


Fig. 1 10632/19

2 figures, 4 claims.

10,549. 26 Mar. AKTIEBOLAGET LJUNGSTRÖMS ÅNGTURBIN, *assignee of* F. LJUNGSTRÖM, *act. inv.*, Sweden.

Classes 63.8 ; 95.1.

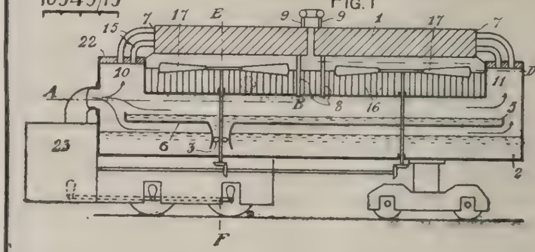
Locomotive Condenser.

To provide for the condensation of exhaust steam under extreme variations of load, it is passed direct from the motor 23, partly through a water receptacle 2, and partly through passages 10 and 11 to a cooler 1.

Water in the chamber 2 is raised by a pump 3 on to a tray 5 which has a series of holes or slots in its base, the water gravitating through these slots in the form of sprays through which the steam passes on its way to the passage 11. The steam passes through the pipes 15 and enters the air coolers 1 which are built up of a series of laminæ formed with corrugations which cross one another angularly, thereby forming air and steam spaces, the latter terminating in outlets 8 through which the water of condensation passes. An air pump connexion is provided at 9, and the cooling is further assisted by the fans 17 and inclined guide plates 16.

In a modification, an air drum having a bell end and fitted with a fan is interposed between the chamber 2 and the air cooler, and a further modification provides for placing the air coolers obliquely.

10549/19 Fig. 1



14 figures, 15 claims.

10,722. 10 Apr. D. R. N. TAYLOR and D. MARKS, New South Wales.

Sec. 63A. Including cognate No. 14,308/*20*.

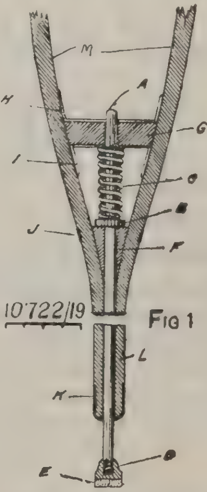
Class 87.4.

Resilient Crutch.

A resilient crutch in which the lower portions of the staff members are grooved and secured together by metal bands **J** and **K** to receive a rod **A** which extends below the ends of the staff members and operates against a spring **C**.

One end of the rod **A** is fitted with a cap **D** which carries a pad **E**. The other end passes through openings in a guide piece **G** and a wedge block **F**, the latter serving as an abutment for a collar **B** which engages with the coiled spring **C**.

A rubber pouch, which may be enclosed in a canvas bag, is attached to the arm-rest of the crutch.



10722/19 Fig 1

4 figures, 6 claims.

Illustrated Notes—*continued.*

10,977. 5 May. Western Electric Company Limited, *assignee of* R. A. Heising, *act. inv.*, New Jersey, United States of America.

Class 05.5.

Radio Signalling System.

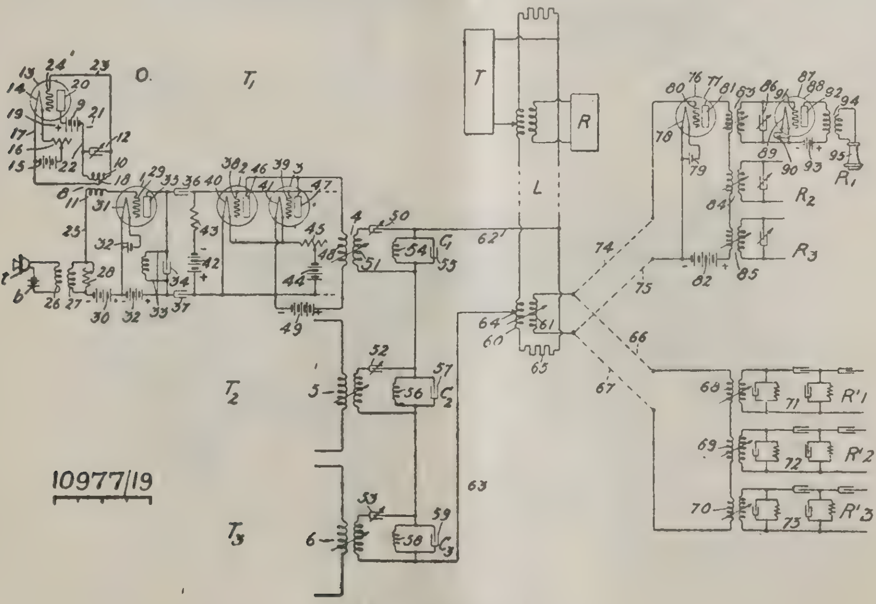
To prevent interference with the received signals by the local transmitted currents in a multiplex signalling system, an artificial line of substantially pure resistance is inserted in the line at each station.

The artificial line 65 and that part of the primary winding 60 between it and the point 64 comprise a shunt around the transmitter circuits connected to leads 62 and 63. As the impedance of line 65 is exactly the same as that of line L, outgoing currents in the two halves of primary 60 are equal but flow in opposite directions, the resultant effect on the secondary 61 or local receiving circuits is therefore nil.

Anti-resonant circuits C1, C2, C3, each tuned to the frequency of their respective transmitter circuits, are connected in shunt to the secondary windings of transformers 4, 5 and 6, and offer each a path of high impedance to currents supplied by their respective transmitter circuits, but a low impedance path to currents of other frequencies. The impedance offered by the secondary windings to currents other than those from their associated transmitters is thereby overcome.

Speech distortion, due to the suppression of higher harmonics, may be overcome by the provision of selective filters 71, 72, 73, having a relatively flat-topped transmission characteristic.

Frequencies of the currents transmitted from one terminal station are chosen intermediate those transmitted from the other and preferably halfway between.



10977/19

1 figure, 9 claims

Illustrated Notes—*continued.*

11,184. 22 May. M. G. Farquhar and A. H. Hill, England.

Class 89.3.

Automatic Fire-arm.

An automatic fire-arm having coiled springs in a tube adjacent to the barrel which operate to open and close the breech, is provided with a magazine **d**, held in place by a rib **f**, studs **d**^{2}, and spring catches **d**^{4}, **d**^{5}, engaging with projections **a**^{1} and **h**, and a sheath **i**, enclosing the barrel and spring tubes, and furnished with ventilation holes which are opened and closed by slides **i**^{1}.

A metal strap **k**, and bar **k**^{1} with screwed holes, retain a handle **l** or the top of a tripod,

The sliding bolt **b**, when fully drawn back, is retained by a lug **b**^{1} engaging an arm on a spring-pressed lever **m**, **m**^{1}, from which it is released by pulling the trigger or pressing a thumb-piece **m**^{2}. A safety lever **o**, when turned on its axis into the path of lug **b**^{1}, holds the bolt cover **b** in "safe" position.

The backsight **p** is hinged to a detachable body cap **r** which has a projection **r**^{2} with lugs **r**^{3}, which fit into an annular groove on the body **a** of the gun, and are held in position by a catch **s** on a spindle **s**^{1}.

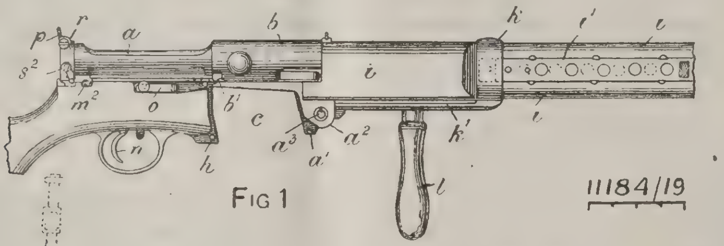


FIG 1

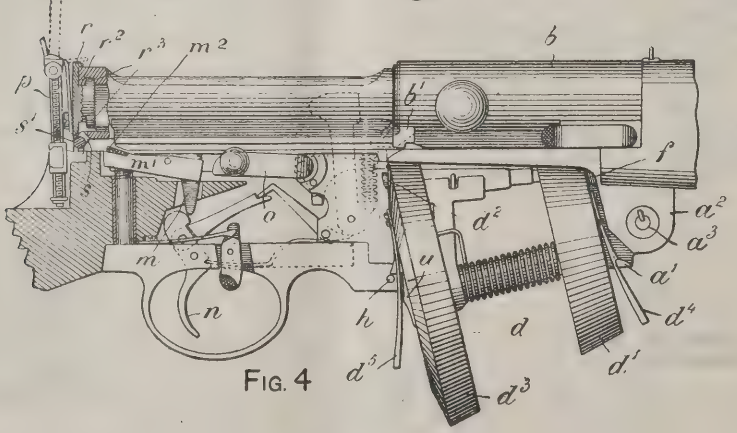


FIG. 4

12 figures, 7 claims.

Illustrated Notes—*continued.*

11,204. 22 May. A. H. Lymn and N. E. Rambush, England.

Date applied for under International or Intercolonial Arrangements. 17th May, 1918. Great Britain, No. 119,207.

Classes 16.30; 16.8.

Gas-producer.

To raise and laterally displace the fuel charge, a revolving ash-bowl and grate **g** having the whole or part of its superficial area of incomplete spiral, or similar configuration, is provided with surfaces which have a gradual rise followed by downwardly sloping sections containing a series of steps to render the descent less abrupt.

The surface of the upwardly sloped sections is preferably slightly curved, the difference in level between the lines **i**, **l**, and **h**, **k** representing the total rise of the charge. The drop sections are provided, between the highest level **i**, **l** of each raising section, and the lowest level of each next raising section, with a series of horizontal steps **m** to form a sloping step grade, the blast issuing between the steps and around the blast inlet cover **p**.

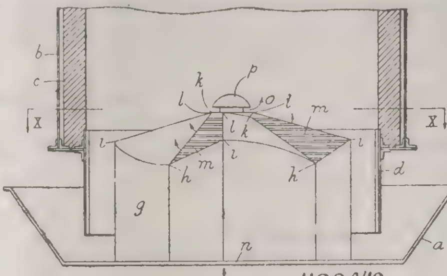


FIG.1 11204/19

2 figures, 4 claims.

11,351. 2 June. W. & T. Avery Limited, *assignee of* F. G. Mitchell and T. St. J. B. Parnall, *act. invs.*, England.

Classes 56.8; 59.9.

Weighing Travelling Crane.

To combine the operations of weighing and of lifting and transport in a single apparatus, a travelling crane consists of two parts connected by weighing levers and carrying the supporting wheels and the lifting gear, respectively.

The grab drums **20** with their gearing and motors are carried by a frame **11**, **12**, which rests upon weighing levers **27** fulcrumed at **28** in bearings attached to the main frame **4** which carries the supporting wheels **5**, the outer ends of the levers being flexibly connected, through **31**, **33** and **34**, to the indicating or recording gear **9** located in the housing attached to the main frame. The crane controls **8**, also located in the housing, have flexible connexions to the motors.

Swinging is minimized by the use of four lifting ropes wound upon two drums and by knife-edge stays **37** laterally connecting the two frames.

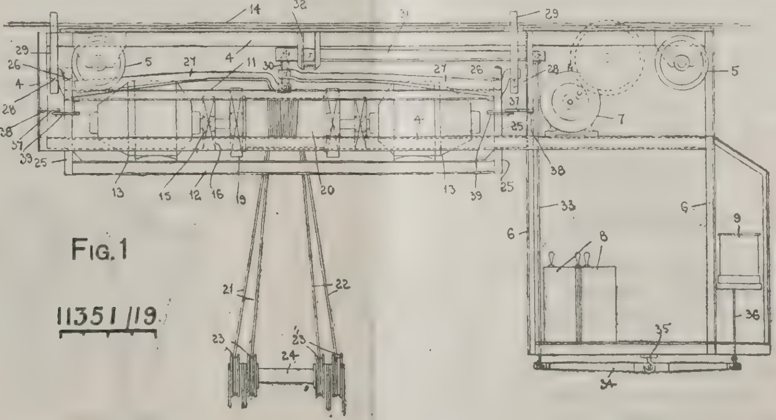


FIG. 1

11351/19

3 figures, 4 claims.

Illustrated Notes—*continued.*

11,605. 30 June. S. J. Jelfs, *act. inv.*, and A. L. Myles, *assignee*, N.S.W.

Class 45.1.

Folding Chair.

A folding chair in which the ends of the back frame engage notches 15 and 16 on the upper side of the supports 4 to which they are secured by tie-plates 17.

The canvas is secured to cross bars 8 and 13, and passes behind a bar 9 which is secured to the supports 3 and pivotally connected to the back frame.

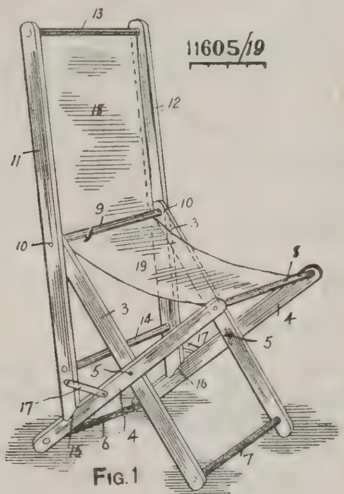


Fig. 1

2 figures, 4 claims.

11,620. 30 June. T. H. McGrath and H. F. Milford, D.D.S., New South Wales.

Class 87.1.

Composition.

To provide a preparation usable as a fruit spray, pest destroyer, animal lotion, or disinfectant, about 120 gallons of creosote oil, 240 lb. resin, 4½ gallons of castor oil, and 7½ lb. stavesacre are mixed together whilst being submitted to slow heating sufficient to bring the resin to a liquid state. The oily mixture is saponified with about 40 lb. of caustic soda, and 300 gallons of a solution of quassia is thoroughly intermixed.

A small amount of an oil or extract of eucalyptus may be added, and the mixture may be applied undiluted for treating animal sores, or a 1 per cent solution may be used as a dip or disinfectant, or 3 to 7 per cent solution as a spray for trees.

No drawing, 3 claims.

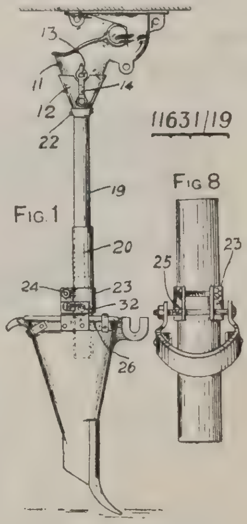
11,631. 1 July. R. A. Mintern and G. D. Brehaut, Victoria.

Class 31.1.

Delivery Tube for Drill.

A delivery tube for grain and fertilizer drills which consists of telescopically slidable parts 19, 20, connected to a fixed receiver 11 by means of a universal joint comprising a socket 12 having spring clips 14 which engage pintels 13, formed on opposite sides of the receiver, and pins 22 which are at right angles to the pintels 13.

An adjustable clamp 23, tightened on the member 20 by a clamping screw 24, is provided with holes 25 to which a spring clip 26 carrying the boot A is pivotally attached by means of a pin engaging the holes 25 and the clip adjustment holes 32.



10 figures, 8 claims.

Illustrated Notes—*continued.*

11,664. 3 July. E. H. Parker, Eng.

Date applied for under International or Intercolonial Arrangements, 3rd July, 1918, Great Britain, No. 124,349.]

Class 66.5.

Extra Air Valve.

To enable an internal combustion engine to work efficiently under different atmospheric conditions, a combined piston and mushroom valve operated by the engine suction against the influence of a compound spring 5, is adapted to open slots in the valve casing to admit extra air.

The slots 6 which are of various sizes register with corresponding slots in a ring 8 which can be turned to allow the correct amount of air, as required by atmospheric conditions, to pass through the valve.

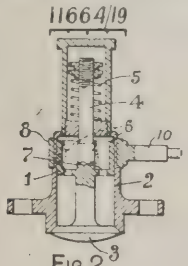


Fig. 2

3 figures, 5 claims.

11,665. 3 July. G. R. H. Abbott, N.S.W.

Class 29.3.

Butter Cooler.

A domestic butter cooler of the porous type has a double wall forming a water jacket 8, open at the top to permit of easy cleaning. Ventilating holes 13 and 9 are formed in the lid and bottom, the latter entering a circumferential groove 11 while the bottom is raised by feet 14 so that air may freely circulate.

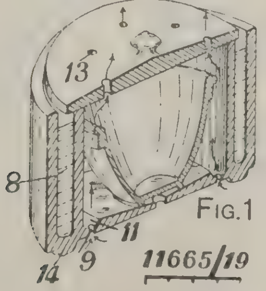


Fig. 1

2 figures, 3 claims.

11,678. 4 July. W. O'Brien and A. Morse, New Zealand

Class 93.3.

Brake for Horse Vehicle.

To utilize the strain exerted on the breeching by a horse harnessed to a vehicle for applying the brakes, straps G, attached to the breeching F and passed around rollers H1 fitted to the shaft, are carried rearwards and connected by chains J to the bar D connecting the brake blocks A.

On the horse being checked in travelling, or on the vehicle going down-hill, the weight of the vehicle pressing forward causes a rearward pull on the breeching F resulting in a forward pull on the extensions and applying the brakes.

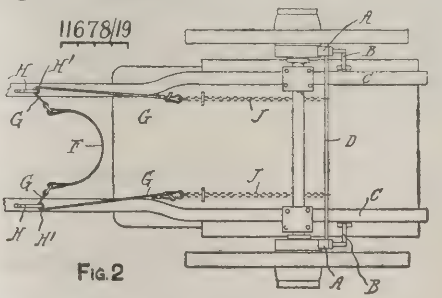


Fig. 2

2 figures, 2 claims.

11,788. 12 July. Denton Hats Limited, *assignee*, and J. Ashworth, *act. inv.*, Vic.

Class 43.8.

Felt Hats.

To shape and form a hat, the body is held in a chamber D by brim-engaging rings K and L, and a blast of steam and cooling air is admitted through pipes G and H. When the body is sufficiently soft to be pliable, the hat block B, counterbalanced by weights N^1, is applied and held down by catch N^3, the depth to which the block passes being adjusted by set-screws N^2.

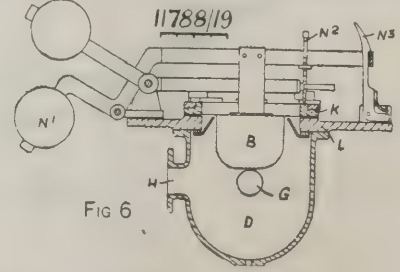


Fig 6

8 figures, 3 claims.

Illustrated Notes—*continued.*

11,838. 18 July. H. L. SULMAN and W. B. BALLANTINE, England.

Date applied for under International or Intercolonial Arrangements, 2nd July, 1918, Great Britain, No. 10,819/*18*.

Class 15.8.

Manufacture of Alloys.

A process for the production of alloys, in which the metals are introduced in the form of compounds in chemical combination with each other, any extra quantity required of one of the compounds above that already in chemical combination being added in combination with the preponderating metal of the alloy, the whole being mixed with aluminium powder or other thermo reducing agent and ignited to reduce the compounds to metallic form.

As an example, in producing a high-speed steel having the following composition:—Tungsten 17 per cent, vanadium 0.5 per cent, chromium 3.5 per cent, carbon 0.6 per cent, iron 77.5 per cent, chromium detungstate which is readily prepared contains chromium and tungsten in the ratio of approximately 1 to 3½, the ratio required between these metals by the above example being approximately 1 to 5. The balance of tungsten required is combined with ferrous and ferric oxides, iron being the preponderating metal of the alloy. The vanadium is introduced as either ferrous or chromic pyro-vanadate and the carbon by adding scrap metal, or a special form of iron high in carbon may be used. If desired, an alloy carrying high percentages of the metals may be prepared and the quantity required to produce an alloy of the desired composition added to a mass of molten steel.

No drawing, 7 claims.

11,971. 31 July. R. CRAWFORD and W. G. D. TAYLOR, Scotland.

Class 89.3.

Automatic Pistol.

To enable a pistol to be fired from the shoulder, it is attached to a stock **K** by a curved dovetail joint retained by a thumb-operated locking device.

A holster **R** is attached to the stock, as a housing for the pistol, and the latter is capable of being rendered useless by the removal of a detachable portion **B**¹ of the operating mechanism. The backsight is graduated and adjustable, and the foresight has its surface milled or roughened.

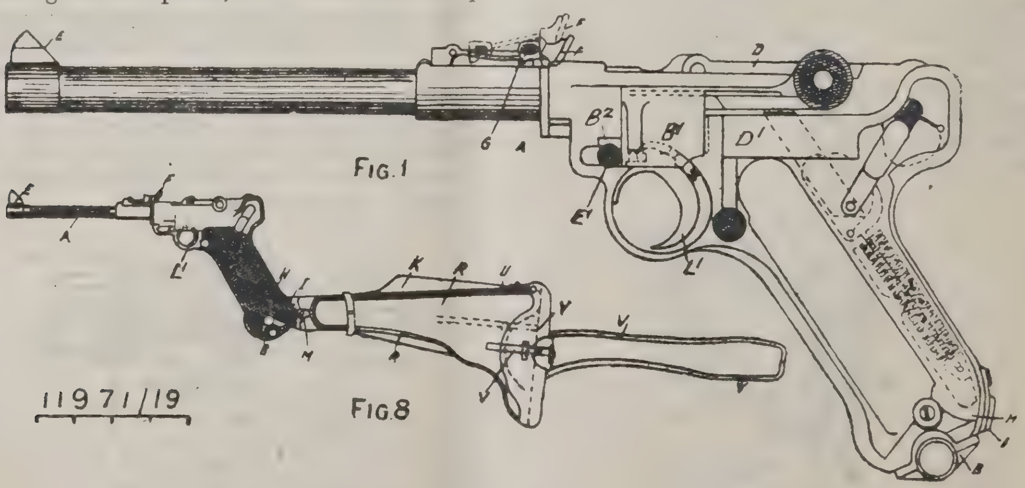


FIG. 1

FIG. 8

12 figures, 7 claims.

Illustrated Notes—*continued.*

12,007. 4 Aug. A. Heimann, New York, United States of America.

Classes 56.8 ; 55.7 ; 54.16.

Automatic Weighing Machine.

An adjustable weight indicating mechanism, which works in conjunction with an advertisement display mechanism, and is operated by coin receiving mechanism adapted to control the position of an actuator by which a check device is moved to cause the release of the indicating mechanism.

The weighing platform is connected by a rod **14** to a floating cross-head **13** adapted to extend the springs **12** and allow the stem **26** to move downward. If a coin has been inserted, the check pawl **30** is released from ratchet wheel **29** to allow the latter to revolve, and thus impart rotation to the indicator spindle **17**.

After inserting the coin, a handle is pulled downwards, depressing an actuator **41**. The stem **56** moves upwards, rocking the arm **51** to the left so that the dog **57** will be in a position to be engaged by the arm **58** of the actuator **41**, which is thereby moved under stem **60** and so causes the pawl **30** to be freed from the ratchet wheel **29**. A pawl **46** prevents the machine from being operated twice by the same coin.

Drums **4** and **7** which display advertisements are revolved automatically by the weighing mechanism, and periodically by a clockwork motor **74** which is rewound by the operation of the machine. Dampers **24** and **62** are provided for damping the movement of the recording hand and spindle **60** respectively.

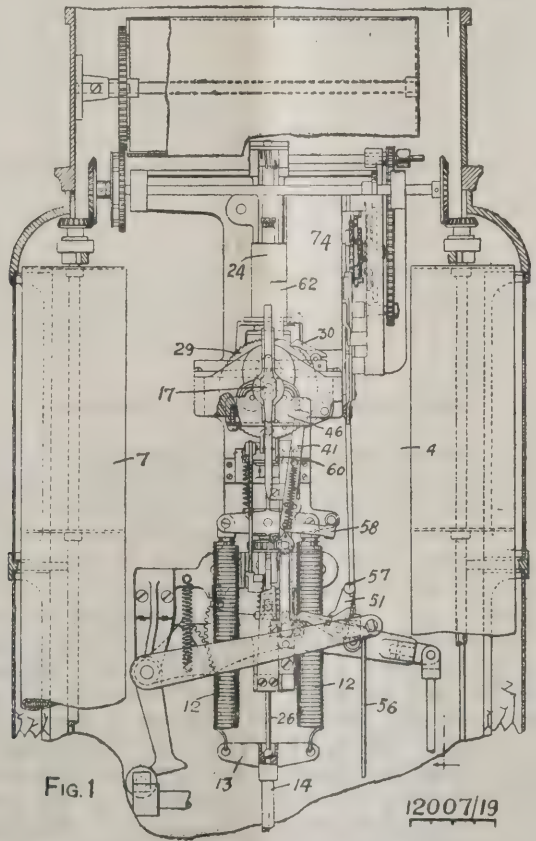


Fig. 1

10 figures, 20 claims.

Illustrated Notes—*continued.*

12,039. 6 Aug. H. L. Allan, Scotland.

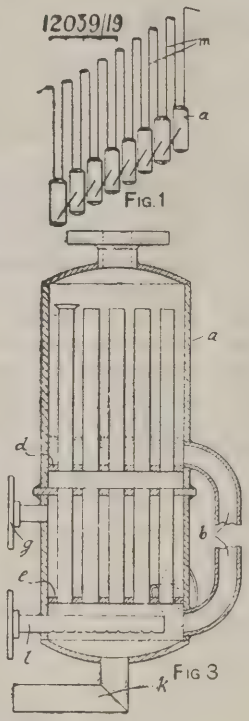
Classes 28.5; 20.6.

Fractional Condensation.

To continuously separate the constituents of a mixed hydrocarbon a cascade of condensers are arranged to bring the material to be fractionated into contact with the vapours from a still, the condensate flowing in cascade form through the condensers and thereby coming in contact with hotter condensates in its course.

The atmospheric condensers **a** are divided by the tube plates **d** and **e** and the cascade pipes **b** are arranged so that the upper compartment communicates with the lower compartment in the next lower vessel, the vapours from each entering the next vessel higher by the vapour pipes **m**. Superheated steam may be blown in by the connexion **g** to give additional heat to the vessel, while the lower compartment can be provided with live steam by the pipe **l**. A draw-off pipe **k** is provided to each condenser, and controlling cocks are placed in the cascade pipes.

3 figures, 9 claims.



12,229. 23 Aug. Automatic Electric Company, *assignee of* J. Wicks, *act. inv.*, Illinois, United States of America.

Class 05.7.

Automatic Telephone System.

A system in which the automatic switches are controlled over a circuit superimposed upon the conductors of a trunk line, the circuits being arranged so that the operations of the switches are dependent upon the polarity of the battery connected to each end of the operating circuit.

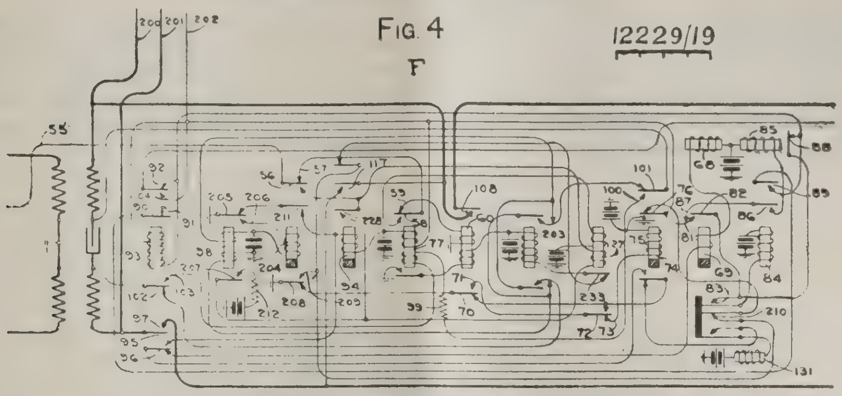
The line relay **60** at selector repeater **F** is energized from battery at a repeater over conductor **55**, and at spring **108** controls the circuit of the line relay at the connector. Relay **60** closes the circuit of relay **74** which in turn closes the circuit of the polarizing winding of relay **77**, the lower winding of which is connected across the line circuit through springs **100**, **101**, and **102**, **103**. On the energization of the back bridge relay at the connector the direction of the current flow in the lower winding of relay **77** is reversed and relay **77** energizes and switches conductor **55** from relay **60** to battery through the upper winding of relay **127**. By this action a relay at the repeater is permitted to energize to reverse the current in regard to the calling line. This reversal of current is repeated from the called to the calling end of the trunk line.

Release is effected by the energization of relay **127** which energizes relay **74** to close the circuit of the release magnet **131**. The restoration of the current to normal effects the release. The trunk circuit is two-way enabling connexion to be extended in both directions.

[*Illustration next page.*

Illustrated Notes—*continued.*

FIG. 4



5 figures, 7 claims.

12,284. 27 Aug. Emma Nicolai, Germany.

Classes 87.3 ; 37.2.

Medicated Pad.

To obtain a transfusing effect from medicaments spread upon the skin, and to produce a congestion of blood at the spot under treatment, a pad, shaped to conform with the part under treatment, comprises a layer 3 of collodium or other material adapted to withstand the action of medicaments or fat followed by a heat-insulating layer 2 of cotton wool or the like, the whole being backed and braced by a stiffening material 1, such as linen pasteboard, provided with holes for ribbons 4 to attach the pad to the affected part.

In a modification, to prevent the pad coming in direct contact with the skin the pad is provided with a raised border filled with wadding or the like.

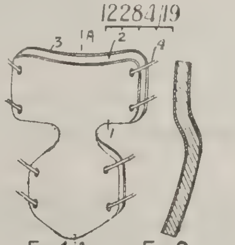


Fig 1 Fig. 2

7 figures, 4 claims.

12,271. 26 Aug. The British Westinghouse Electric and Manufacturing Company Limited, *assignee of* H. L. Guy, *act. inv.*, England.

Class 67.1.

Steam Turbine.

To vary the speed of a turbine and to make provision for overload, an additional section 16 having an independent steam supply is provided.

When running at reduced speed, steam is admitted to the nozzle box 27 to operate the velocity wheel 28. The partially expanded steam is then passed from the section 16 by passage 32 to the nozzles 33 to operate the wheel 20 and moving blades 25, 25a, and 25b within the high speed section 15 and is discharged through the outlet 35.

When running at highest speed, steam is supplied to the section 15 through nozzle boxes 18 which project the steam on to the set of blades 23. In the case of overload, steam is admitted simultaneously to the main and additional sections.

In a modification for running at three different speeds, two additional sections are provided in one of which the direction of

[*Continued next page.*

Illustrated Notes—*continued.*

flow is opposite to that of the main section and the other section.

In a further modification having two additional sections, the steam is conducted from the first section to the intermediate section by a bent pipe and nozzle box.

In a still further modification of the reaction type, the turbine is divided into a number of separate elements working in separate chambers, steam being admitted to the various sections according to the speed desired.

12271/19

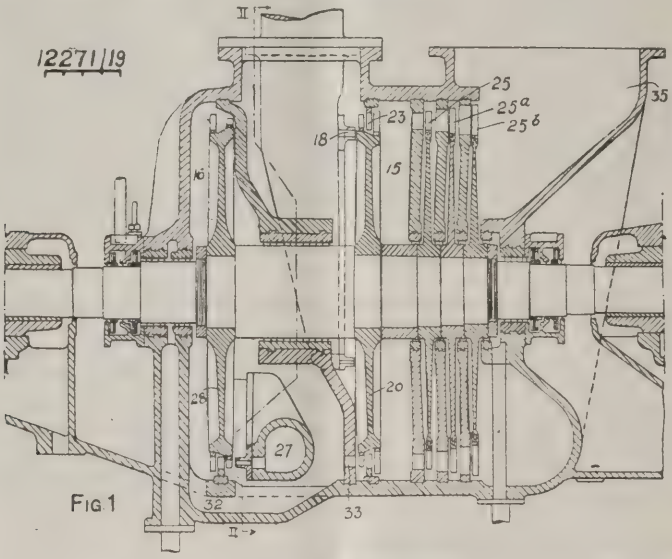


Fig. 1

12 figures, 2 claims.

12,437. 8 Sept. A. Carrette, France.

Class 72.9.

Screwing Device.

To effect adjustment of an apparatus without removing the dies, the latter are formed with studs **C**2 engaged in grooves **j** in a rotatable plate **e**.

Within a casing **a** are mounted four similar dies **c**, with cylindrical heads **c**1 engaged in recesses **d** in the casing, the upper face of which is closed by the plate **e** which is held in position by a ring **f**.

The plate **e** has four grooves **j** in which engage studs **c**2 of the dies **c**, and by rotating the plate **e** the dies are caused to move towards or away from one another. The plate **e** is caused to rotate by a screw **n** terminating in a hook **n**2 acting upon a pin **k** fixed to the plate.

In a modification, the body of the apparatus terminates in a sleeve to be held in a lathe. In front of the body, a ring in which the dies are pivotally mounted is fixed to a sleeve surrounding the body and held by nibs engaging in grooves that allow the rotation of the sleeve, thus controlling the movement of the dies.

In a further modification, the screw, instead of terminating in a hook, has a flat prolongation containing a slot with a hole at its inner end corresponding to an axle pin which has flat sides adapted to slide in the groove. The device is locked when the axle pin is positioned in a hole at the top of the groove by turning the axle pin.

12437/19

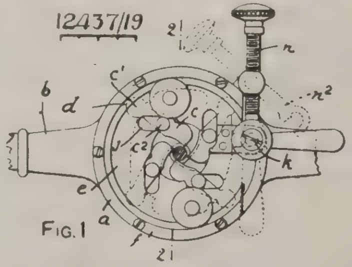


Fig. 1

10 figures, 7 claims.

Illustrated Notes—*continued.*

12,522. 15 Sept. L. J. Pedler, N.S.W.

Class 94.3.

Cycle Rim-brake.

To apply a brake to the rim of the rear wheel by means of rearward pressure from the foot, a lever pivoted upon the rear stays is connected with a yoke carrying brake-blocks which are brought into action when the pedals are turned in a reverse direction.

The yoke, which consists of two metal straps **6** connected by a screw **8**, is pivotally attached by a pin **21¹** to an operating lever **22** pivoted upon a pin **23** carried in bearings **25** formed in the upwardly extended sides **26** of clips **27**. The metal strips **6** carry brake-shoes **11** and blocks **12**, and are provided with extensions **15** which are fitted with springs **31** and supported in bearings **17** secured to the frame **20** by clips **18**.

By bringing the foot in contact with the flattened portion **34** of lever **22**, the blocks **12** are brought into engagement with the wheel rim **13**.

In a modification, the brake-blocks are replaced by rollers bearing on the tyre of the machine.

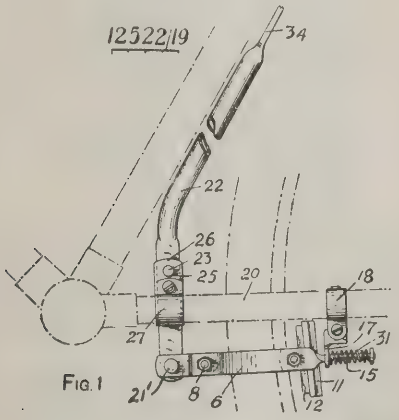


Fig. 1

2 figures, 7 claims.

12,600. 23 Sept. L. H. Browne, N.Z.

Class 36.13.

Teat Cup Mouthpiece.

To facilitate dismantling, the mouthpiece of a milking machine teat cup is formed of two pieces **c** and **c¹** which slide into each other and form a groove with rounded flanges over which the ends of the inflation **B** and the cushion **D** are stretched.

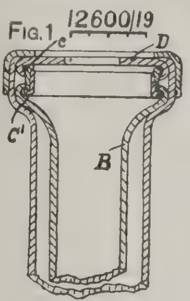


Fig. 1

4 figures, 4 claims.

12,654. 27 Sept. D. T. Ellis and G. J. Sawtell, New South Wales.

Class 53.9.

Toy Gun.

To enable crackers, &c., to be fired without danger, a cone-recessed breech-block **11** with a fuse orifice **15** is fastened to the end of the barrel **6** by a bayonet catch **7**, a spring **8** being provided to secure engagement. The barrel may be attached to a handle **16** or mounted on wheels.

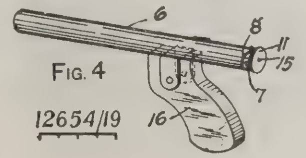


Fig. 4

5 figures, 5 claims..

12,721. 1 Oct. Western Electric Company Limited, *assignee of* O. B. Blackwell and J. F. Baldwin, *act. invs.*, New Jersey, United States of America.

Classes 05.7; 03.2.

Telephone Transmission System.

To reduce cross talk between the two sides of a four wire transmission system, the conductors of lines transmitting in one direction are electrically separated from those transmitting in the opposite direction, and a similar action is taken in regard to the re-

[*Continued next page.*

Illustrated Notes—*continued.*

peaters and loading coils employed in the circuits.

In the transmission cable (Fig. 2) the groups of conductors **20**, **24**, **26** are electro-statically and electro-magnetically separated by spirally wound layers of metallic tape **23** and **25**. At the repeating station the repeaters associated with different groups of conductors are arranged in different groups. Similarly the loading coils (Fig. 6) are arranged in separate chambers **43** and **46** within the casing **40** and are separated by spacers **57** of magnetic material.

In modifications, the loading coils may be disposed in a single casing and the groups separated by a spacer of a width equal to the width of a coil, or the spacer separating the groups may be earthed.

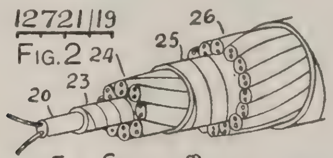

12721/19

FIG. 2

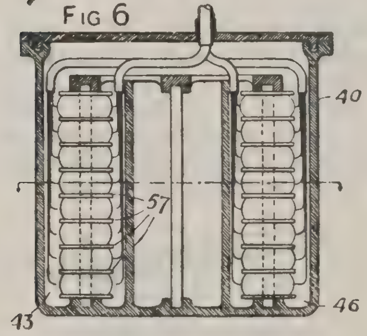


FIG 6

10 figures, 8 claims.

12,946. 17 Oct. H. Welsh, N.S.W.

Classes 93.2; 93.9.

Tonneau Wind Shield.

An adjustable folding wind shield in which the frame is rotatably mounted in brackets attached to the back of the front seat and clamped at any angle to a stanchion secured to the car floor.

The stanchion **11** has a clamp collar **14** with a serrated edge **15** tightened by a nut **42** upon the serrated collar **17** of the tubular carrier **18** which is rotatably mounted in brackets **21**, its outer ends being bent upwards to receive the bottom ends of pintles supporting the main shield frame by means of tubular extensions **32** and the wing shield frames **34** by means of tubular extensions **35** and **36**. The upper ends of the pintles **27** are provided with nuts **29** for locking the main and wing shields.

By unscrewing the nut **42**, the shield may be lowered by folding it downwards against the back of the fore-seat.

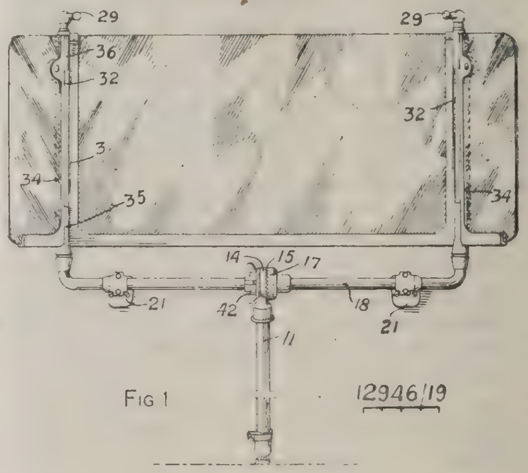


FIG 1

12946/19

5 figures, 5 claims.

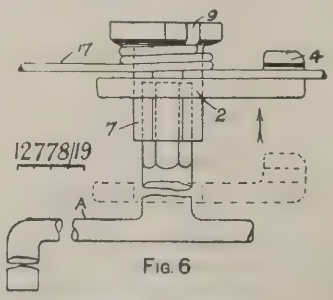
12,778. 4 Oct. H. H. Hiscock, Vic.

Class 81.8.

Wire Strainer.

To finely adjust the strain upon the wire a strainer is furnished with a barrel **7** of polygonal shape provided with a keeper **2** which fits upon the body of the strainer and has a lug **4** engaging the wire.

A slot **9** in the barrel receives the wire **17** and a removable key **A** is used to turn the barrel.



12778/19

FIG. 6

6 figures, 4 claims.

Illustrated Notes—*continued.*

12,949. 18 Oct. R. Tegel, N.S.W.

Class 81.2.

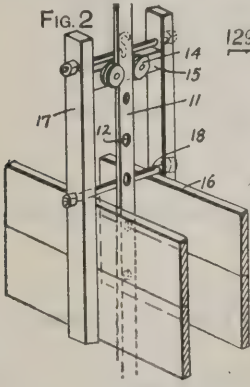
Concrete Wall Moulds.

To construct concrete walls by means of moulds comprising a number of standardized parts detachably connected together, the vertical reinforcement members 11 form guides for the rollers 14 attached to the distance blocks 15 and enable the moulds to be progressively raised by means of the superimposed lifting rods 20 on the scaffold 10, a chain being attached to the swivel hook 21 and to a hook on the blocks 15.

Cross bolts 18 are used for clamping the members 17 against the boards 16, and the vertical reinforcing members 11 are held in position by means of transverse reinforcements which pass through the orifices 12.

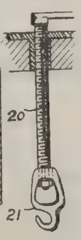
For constructing cavity walls, adjustable division plates are used.

Fig. 2



12949/19

Fig. 4



11 figures, 13 claims.

13,012. 24 Oct. W. E. Hoke, Wash., D.C., United States of America.

Date applied for under International or Intercolonial Arrangements, 12th Apr., 1919, United States of America, Serial No. 289,591/*19*.

Class 75.3.

Making Length Gauges.

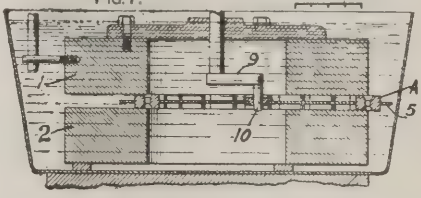
To form gauges with parallel flat end faces and of identical lengths, a number of blocks are simultaneously lapped between two opposed flat laps, the movement being such that every part of each end surface of each block engages the entire working surface of the laps, and placed together end to end for comparison with a standard length to form a check on the accuracy of the individual pieces of the series.

The gauges A are located in holes formed in a spider 5 which is revolved by a crank 9 and free to rotate around the pin 10, thus causing each block to pass over the entire surfaces of the fixed laps 1-2 which are charged with a suitable abrasive. On the assumption that the gauges at one point in the circumference will be lapped to a greater extent than those diametrically opposite, the gauges are periodically transposed to a position diametrically or tangentially opposite.

After lapping, the gauges of a series are wrung together and compared with a known unit of length equal to their predetermined total length.

The laps may be supported within a bath of liquid, and in modifications positive stops are provided for arresting the lapping operation and a positive drive for rotative motion to the spider.

Fig. 1. 13012/19



16 figures, 31 claims.

13,140. 31 Oct. B. S. McClellan, Illinois, United States of America.

Class 60.7.

Journal Bearings for Compressors.

To prevent the escape of ammonia from the crank chamber of a compressor the journal bearing is provided with an annular oil channel around the shaft so that fluid escaping along the shaft will rise through the oil and escape back to the crank chamber through a channel leading from an oil pocket in the crank chamber to the oil ring.

The splash fed oil pocket 34 in the crank chamber 8 of the compressor 1 feeds oil to the ring 39 through the oil duct in stuffing-

[*Continued next page.*

Illustrated Notes—*continued.*

box 37. The ring 39 has an inner channel 40 next to and encircling the shaft 9 and an outer channel next to the stuffing-box 37 with holes 42 connecting the two channels. The ring 39 is positioned to register with the oil duct from oil pocket 34 by means of packing 37^1 on each side thereof. The volatile fluid escaping from crank chamber 8 along shaft 9 past oil opening 32, meeting the encircling oil ring 40 passes up through holes 42 and so back to crank chamber through the duct leading to oil pocket 34.

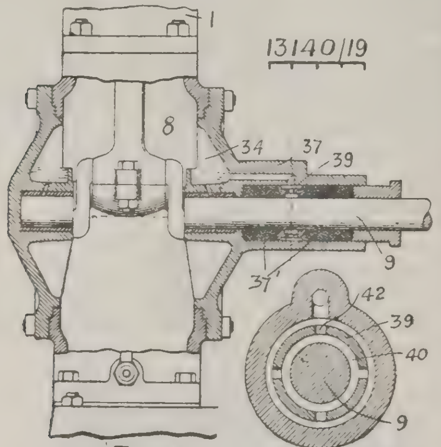


FIG.1 FIG.3

3 figures, 5 claims.

13,176. 3 Nov. W. C. LEECH, N.S.W.

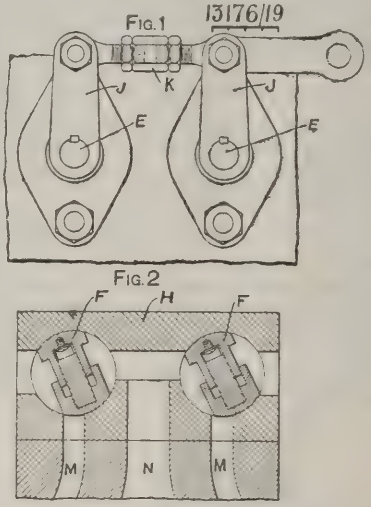
Class 64.5.

Oscillating Valve.

A valve for steam engines which has a minimum wearing surface and may be readily adjusted, comprises two oscillating valve spindles E having cranks J linked by adjustable means K and provided with blades F controlling the passage of steam to the cylinder ends and exhaust.

The valves are seated in a valve block H which is provided with passages leading to the steam inlet ports M and to the exhaust port N, and flat or spiral springs are interposed between the flat portions of the spindle E and the blades F to hold the latter against the port faces.

To prevent leakage of steam past the valve spindles, steel collars are shrunk on the rounded end portions of the spindles and are seated in the front covers B.



3 figures, 2 claims.

13,258. 10 Nov. J. G. SNELLING, New South Wales.

Class 94.9.

Extra Tyre Carrier.

To enable an extra spare tyre to be carried, it is supported upon a cradle carried by two claws hooked over the lower part of the spare tyre and is retained by a claw bolt engaging the upper part of the spare tyre.

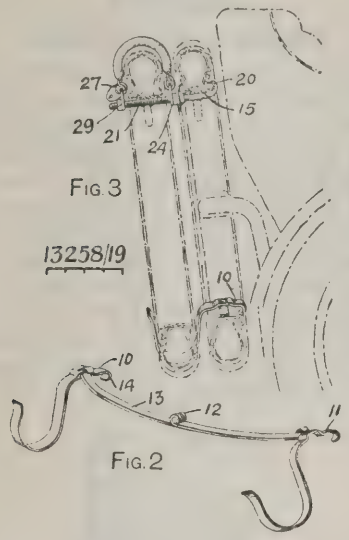
The cradle claws 10 and 11 are loosely connected by a spreader 13 jointed at 12. A claw 20, formed on one end of the bolt 21, hooks over the distant side of the rim 15 of the spare tyre, and a similar claw 22 sliding on bolt 21 is screwed up against the opposite side of the rim by a nut and eye lug tag 24, thus holding the bolt 21 rigidly in place.

The extra tyre is secured by a leather-covered chain passing over it from the eye

[*Continued next page.*

Illustrated Notes—*continued.*

lug tag **24** to a padlock **27** locked to a similar eye lug tag **29** screwed on the bolt **21**.



4 figures, 8 claims.

13,322. 17 Nov. H. L. M. J. Benard, France.

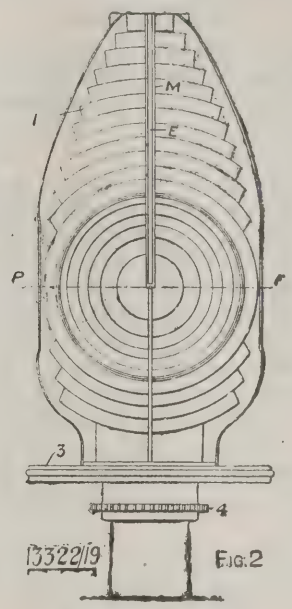
Classes 99.6 ; 00.4.

Aerial Navigation Light.

A signal light for aerial navigation, characterized by the provision of a window which permits of illuminating, with a single source of light, from the horizon up to the zenith.

An aperture **E** is formed between the sides of a double standard **M**, which supports the prisms of the optical system **1**. This aperture extends from the focal plane **P—F** to the zenith of the searchlight which is mounted on a table **3** and rotated by an electric motor through gears **4** and **5**, thereby rendering the light visible from any point on the horizon to a point vertically overhead.

In a modification, the light is shown fitted with a double reflector and optical system.



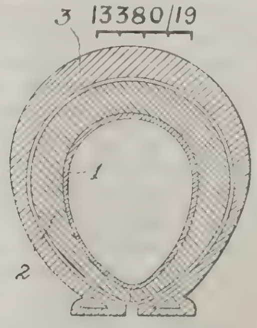
4 figures, 4 claims.

13,380. 22 Nov. Shunichiro Midzushima, Japan.

Class 97.83.

Pneumatic Tyre.

To protect the inner tube **1** against damage from external causes, or friction against the inner face of the outer cover **3**, it has pasted or otherwise secured thereto a secondary cover **2** made preferably of spongy rubber.



1 figure, 3 claims.

Illustrated Notes—*continued.*

13,485. 1 Dec. C. E. Clews, N.Z.

Class 59.1.

Lifting-jack.

A jack for lifting and hauling, in which the operating lever **5** is fulcrumed at **6** to a frame **1** and carries a secondary lever **7** engaging with the rack **2**. A pawl **9** pivoted below the secondary lever is moved into free or engaged position by a rocking arm **12** carrying upwardly projecting springs **13**, **14** and **15** and operated by a reversing lever **20** on the outer end of the shaft **19**.

When lifting or hauling, the crank **20** is so operated that the springs **13** and **14** contact with the inner faces of the depending tails of the pawl and secondary lever, while for lowering, the springs **14** and **15** are caused to contact with the outer faces of the tails.

A shackle **25** is arranged at the top of the frame **1**, and friction rollers **22** are also provided.

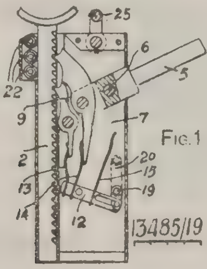


Fig. 1

5 figures, 8 claims.

1920.

13,874. 2 Jan. H. E. Ross, N.S.W.

Class 22.5.

Headlight Glare Screen.

A glare preventing attachment for automobile headlights, in which a grille **16**, composed of spirally or concentrically arranged bands of thin metal disposed edgeways to the reflector axis, is located either behind or in front of the lamp glass **12**.

The bands which are attached to radially disposed rods fixed to rings **18** and **13** have their upper aspect surfaces rendered non-reflective and their lower and lateral aspect surfaces rendered reflective, the spaces between the convolutions being substantially greater in depth than in width.

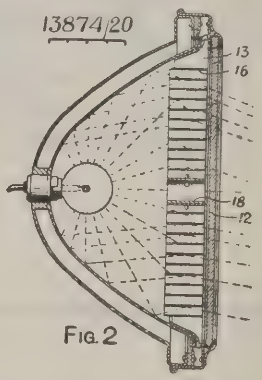


Fig. 2

3 figures, 8 claims.

14,004. 13 Jan. Automatic Electric Company, *assignee of* E. Jacobsen, *act. inv.*, Illinois, United States of America.

Class 05.7.

Party Line Call Registering.

A party line metering arrangement in which a meter selecting switch at the central office is operated by a series of impulses, initiated by the lifting of the receiver at the calling sub-station, to associate with the calling line a metering relay individual thereto. On energization of a line relay **2** at the line switch **C** a circuit is prepared for operating magnet **5** of the meter selector which circuit is closed on the de-energization of the relay **2** in response to a series of impulses delivered to the line by the rising of the switch-hook at sub-station **A**. The wipers **6** and **7** are rotated by magnet **5** to select a metering relay **M1** corresponding to the number of impulses. As soon as the meter selecting impulses cease, the call is extended from the line switch **c** in the usual manner over a selector and connector, an operating circuit for the meter being extended over wipers **27** and **62**. On response of the called sub-station and the subsequent energization of the ring cut-off relay at the connector, the extended metering circuit is grounded and relay **M1** operates to register the call.

Release of the meter selector is effected by the energization of release magnet **28** which restores wipers **6** and **7** to normal in response to the de-energization of switching relay **23**.

[*Illustration next page.*

Illustrated Notes—*continued.*

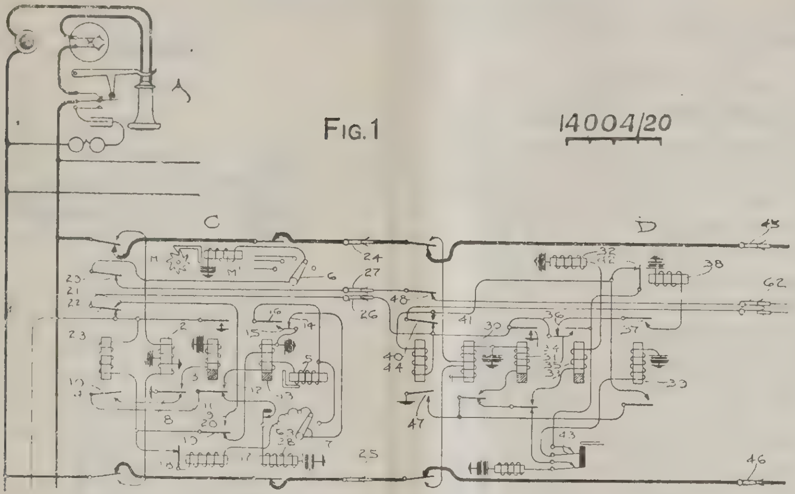


FIG. 1

3 figures, 10 claims.

13,904. 5 Jan. Automatic Electric Company, *assignee of* A. B. Smith, *act. inv.*, Illinois, United States of America.

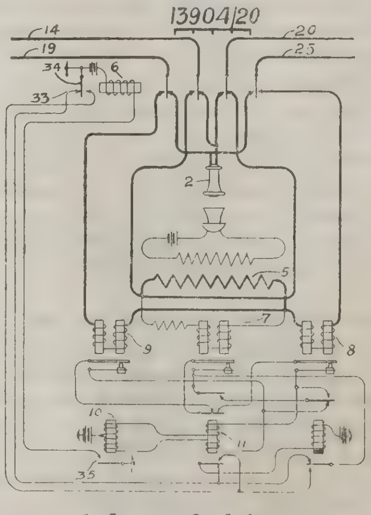
Class 05.7.

Voice Current Repeater.

A repeating arrangement in which a single amplifier is automatically switched over into connexion with either line by a switching arrangement under control of sensitive relays operated by the first wave of weak talking current.

Relay 6 in its de-energized position connects the trunk conductors 14 and 19 to the receiver 2 of the amplifier and trunk conductors 20 and 25 to the secondary 5 of the repeating induction coil and to sensitive relay 8. Relays 7 and 8 at their armatures control differential relays 10 and 11.

When trunk 20, 25 is in use, weak talking current will energize relay 8 and relays 10 and 11 energize over their lower windings. Relay 10 at spring 35 closes a circuit for the switching relay 6 which is energized and connects the trunk 14, 19 to the secondary 5 and sensitive relay 9. Relay 2 opens the circuits of relays 10 and 11 at springs 33 and 34. Relay 10 is adapted to hold its armature unless its upper winding alone is energized The connexion of the trunk conductors is now reversed and the switching arrangement is under control of relays 7 and 9. On another change-over, relay 9 is operated by weak talking current from trunk 14, 19 and opens the lower windings of relays 10 and 11, which causes the de-energization of switching relay 6 at spring 35 to reverse the connections of the trunk conductors.



1 figure, 8 claims.

Illustrated Notes—*continued.*

14,008. 13 Jan. H. J. and J. A. H. DREW, Victoria.

Class 97.2.

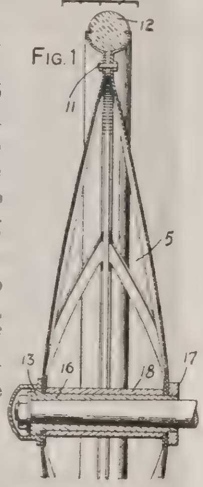
Sheet Metal Wheel.

A wheel in which the tyre **12** is supported on pressed sheet metal disks **6** bolted or clipped together at **11** and clamped on a hub **16** between a shoulder **13** and nut **17**, a distance-piece **18** being placed between the disks. Segments **5** may be cut from the disks, forming the spokes **6**.

Modifications of the hub are described, in which a keyed or square portion of the hub engages with a key-way or square hole in the disk.

14008/20

FIG. 1



13 figures, 18 claims.

14,152. 28 Jan. G. A. TONKIN, *act. inv.*, and P. EVANS, *assignee*, England.

Class 70.1.

Moulding Machine.

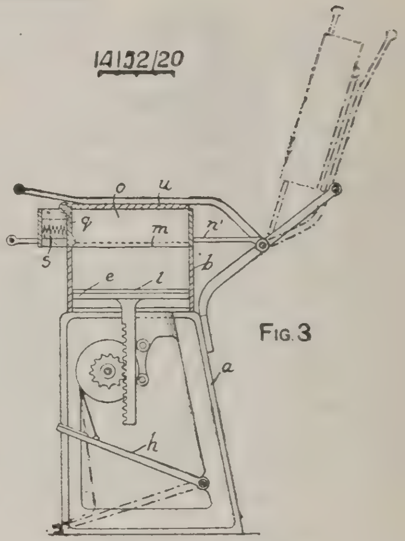
To mould T-shaped concrete building blocks a two-part mould is provided in which the upper part acts as a rammer for the lower fixed mould.

A frame **a** supports the lower mould **b** containing a pallet **l** which can be raised and lowered by a pedal **h**. A rammer **m**, pivotally supported on arms **n1** and comprising one or more moulds **o**, forms the upper mould part. When the tray **e** with pallet **l** is in its lowest position, concrete is filled into the lower mould **b** and packed by lowering the upper mould part **m**. The sides **q** of the upper moulds **o** are closed and these moulds are filled and rammed by the pivoted rammer **u**.

To remove the moulded article, locking plates **s** are swung aside, releasing the sides **q** and allowing the upper moulds **o** and rammer **m** to be raised clear, the rammer **u** remaining on the moulded material to prevent breakage of corners until the moulds **o** are clear of the material. The moulded article on pallet **l** is then raised clear of the lower mould by the treadle **h** and allowed to set.

14152/20

FIG. 3



4 figures, 3 claims.

14,140. 27 Jan. P. C. FIRTH, N.Z.

Class 16.30.

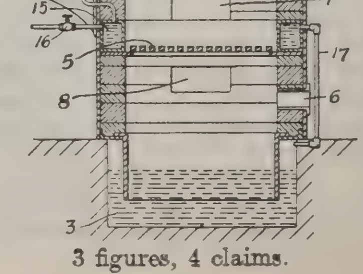
Gas-producer.

A down-draught gas-producer in which the generator **1** is rectangular in shape and is provided with a vaporizer **15** connected by pipe **18** to an air-blast pipe **13** leading to the top of the generator and fed by a pipe **16**, an overflow pipe **17** leading to the curved water-sealed ash-pit **3**.

The gas produced is withdrawn beneath the fire-bars **5** through the outlet **6**.

Doors **7** and **8** are provided above and below the fire-bars **5** for cleaning and inspection purposes.

FIG. 1 14140/20



3 figures, 4 claims.

Illustrated Notes—*continued*.

14,153. 28 Jan. W. J. WALKER, Eng.

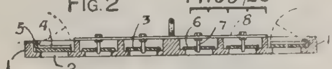
Class 47.2.

Tanning.

To agitate the liquor in the process of tanning, a valve frame 1 is provided with cavities 2 controlled by valves 3 formed of boards 4, hinged at 5, or valves 6 which are free to rise on the studs 7 carried by the bars 8.

To ensure that the valve frame will fall in the liquor it may be weighted. The valve frame may be used in conjunction with a frame supporting the hides. The vats are arranged in series and reciprocating motion is imparted to the valve frame by connecting it by a flexible member running over a pulley to a sliding rod operated by an eccentric.

FIG. 2 14153/20



9 figures, 6 claims.

14,229. 3 Feb. A. T. MASON, England.

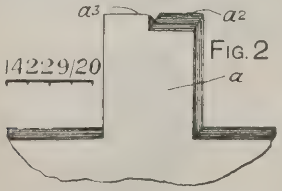
Date applied for under International or Intercolonial Arrangements, 7th May, 1919, Great Britain, No. 11,384/*19*.

Class 53.4.

Book.

A book in which the leaves are provided with flaps **a** containing illustrations and having one edge bevelled in two directions, as at **a**², **a**³ to enable the leaves to slip past the thumb to produce a kinematograph effect.

14229/20 FIG. 2



3 figures, 4 claims.

14,298. 6 Feb. E. A. HAMMETT, Missouri, United States of America.

Date applied for under International or Intercolonial Arrangements, 10th Mar., 1919, United States of America, Serial No. 281,894/*19*.

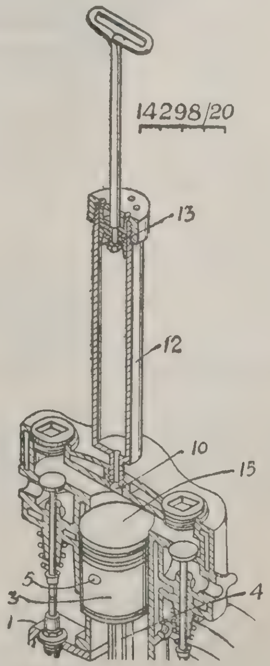
Class 66.7.

Locating Engine Knocks.

To locate knocks in internal combustion engines, the engine piston is brought to top dead centre on the compression stroke and a pump 12, screwed into the spark plug aperture 10, is operated to vary the pressure in the combustion chamber 15.

Should there be any looseness in the connecting rod 4 or wrist-pin 5, operation of the piston 13 will cause a movement of the engine piston 3. Unopposed movements of the piston 13 towards or from the engine 1 will indicate leakage past the piston rings or valve seatings.

14298/20



1 figure, 3 claims.

Illustrated Notes—*continued.*

14,273. 5 Feb. W. R. Ray, California, United States of America.

Class 23.3.

Oil Burner.

A direct driven rotary oil burner in which the oil after being used for cooling the motor is ejected and atomized by the combined action of centrifugal force and an oppositely swirling air blast.

A centrifugal atomizer is mounted within the nozzle **22** upon one end of a hollow shaft **13** which houses the oil delivery pipe **27**, and is rotated by a motor **C** mounted upon its other end, while a current of air is forced past vanes **47** in the nozzle by a fan **16** secured to the shaft which is mounted in ball bearings **14**, **15**, arranged in the bearing extension **11**.

Oil impelled by a pump driven by the worm gear **31** is forced through the jacket **32a** of the motor casing and delivered through the pipe **27** to the atomizer cap **17** where it is projected in the form of a thin spray which meets the air blast from the nozzle, the vanes of which give a swirling action to the air in a direction opposite to that of the discharging oil spray which is broken up and carried forward into the furnace.

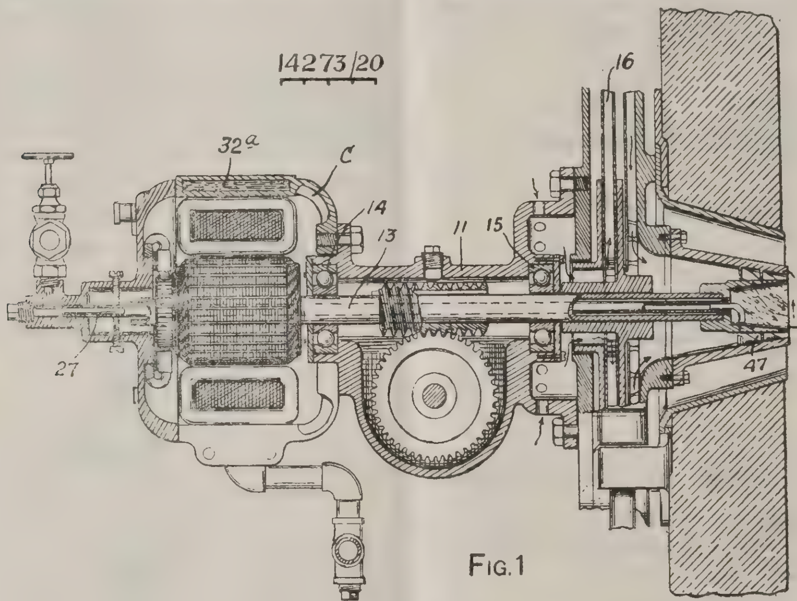


Fig. 1

3 figures, 18 claims.

14,310. 9 Feb. Durham Duplex Razor Company, *assignee of* T. C. Sheehan, *act. inv.*, New York, United States of America.

Class 76.1.

Safety Razor.

To enable blades of the endways and the transverse shank type of safety razors to be used interchangeably, the blade **7** has two cutting edges **8** and a slot **9** and is positioned by a metal plate **10** with upstanding lugs **11** and **12** which co-operate with the slot **9**, the edge not in use being protected by an upturned flange **13**.

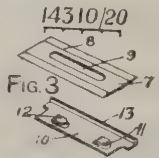
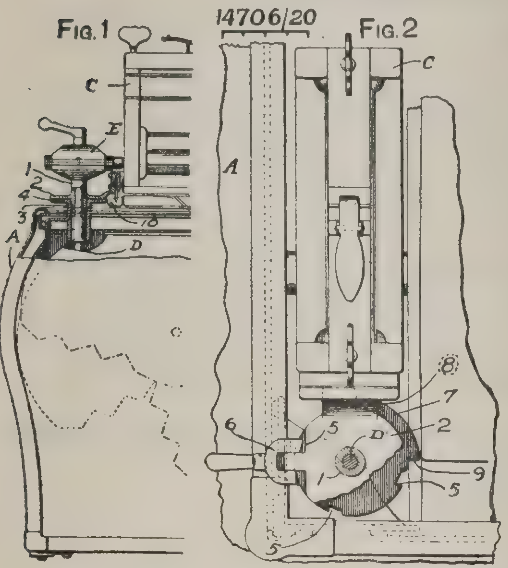


Fig. 3

4 figures, 4 claims.

Illustrated Notes—*continued.*



3 figures, 5 claims.

14,706. 12 Mar. Blue Bird Manufacturing Company, *assignee of* W. S. Ireland, *act. inv.*, Missouri, United States of America.

Class 25.6.

Clothes Wringer Support.

A clothes wringer for use with an oscillating washing tub, in which a check device is provided to prevent the wringer from moving over the tub.

The wringer **C** is operated by a vertical shaft **D** geared to the wringer rolls and housed within a sleeve **1** rotatable in an outer sleeve **3** and integral with a horizontal turn-plate **2** which rests on a table **4** carried by the sleeve **3**, and is furnished with notches **5** to receive a locking member **6**.

A fixed stop **7** on the table **4** has shoulders **8** and **9** engaged by a lug **10** upon the turn-plate **2** permitting the wringer to be swung through an arc extending from shoulder **8** to shoulder **9**.

* * *

Commonwealth Specifications.

The following Specifications are now on sale :—

1904-10.

1 to 20,337, Vols. 1 to 102, complete with title pages, &c.

1911-15.

1 to 7599, Vols. 103 to 140, complete with title pages, &c.
7600 to 7799, Vol. 141, incomplete.
7800 to 8599, Vols. 142 to 145, complete with title pages, &c.
8600 to 18,302.

1916.

1 to 646, and all subsequent accepted Specifications.

The following Specifications, acceptance of which was advertised in *Official Journal* of the 29th June, 1920, are now printed and on sale :—

1918.

8646. McCauley.

1919.

10,284. Newton (Tiscornia — Hill & Meroney).
10,288. Bulman, Smith, & Jones.
10,329. Automatic Electric Co. (Smith).
10,478. Nordiska Kullager Aktiebolaget (Weibull).
10,682. van der Leun.
10,919. Burton & Shaw.
10,991. Blackstone, Carter, & Carter.
11,017. Dawson.
11,026. Duchesne & Gareau.
11,142. The British United Shoe Machinery Co. of Aust. Pty. Ltd. (Boynton).
11,185. Farquhar & Hill.
11,362. King.
11,460. Fraser & Lucy.
11,484. McMullan.
11,498. The British United Shoe Machinery Co. of Aust. Pty. Ltd. (Casgrain).
11,500. Bartens.
11,522. Wells.
11,531. United Engineering & Trading Co. Pty. Ltd. (Reid).
11,537. Murphy. (Drysdale.)
11,593. Western District Co-operative Produce & Insurance Co. Ltd., and Gippsland & Northern Co-operative Selling & Insurance Co. Ltd. (Abbey).
12,047. Burton & Shaw. Cognate sheet.
11,683. Moreland.
12,031. Wigginton.
12,098. Sewell.
12,195. International Harvester Co. of Aust. Pty. Ltd. (Bentley).
12,344. Fraser & Lucy.
12,623. The British Westinghouse Electric & Mfg. Co. Ltd. (Baumann).
12,791. Bower.
12,793. Wills.
12,912. The Petherick Patent Advertising System Ltd. (Petherick).
12,919. Joseph Nathan & Co. Ltd. (Murray & Guy).
13,055. McLean.
13,057. Allan.
13,131. Crown Cork & Seal Co. of Baltimore City (Belden).
13,148. Denz.
13,198. Banks.
13,200. Treadgold.
13,233. Boaz & Brown.
13,261. Schantz.
13,282. Bell & Schoenleber.
13,461. Howarth.
13,499. Wells.
13,582. Rice.
13,797. Hutchinson.
13,863. Johnston.

1920.

13,977. Nobbs.
14,632. Chatterley & Goulding.

Further particulars will be found in the Illustrated Notes, pages 850 to 870 of Vol. 32.

Commonwealth Specifications—*continued.*

A list of Patent Offices and Libraries at which Printed Specifications are placed for *free* public inspection is given with the first list of each quarter.

Complete sets of Printed Specifications may be obtained from the Government Printer, Melbourne, at 4d. per copy delivered over the counter. Specifications relating to one Group of manufacture, in order as issued, or such of the Specifications (in one Group) as may be selected from those already published, until 80 copies have been supplied, may be obtained on depositing £2. Parcels of 30 Specifications may be purchased at £1. Postage should be added to cheques if parcels are desired to be forwarded by mail. Single copies of Specifications, 1s. per copy, post free.

Printed Specifications are on sale at the Trade Marks Sub-offices, at Commonwealth Bank Buildings, Sydney, and at the Customs Houses, Brisbane, Adelaide, Perth, and Hobart.

Applications for Letters Patent for the period 1904 to 1910 were numbered from 1 to 20,337; for the period 1911 to 1915 from 1 to 18,302; a new series of numbers was commenced on the 1st January, 1916. To avoid confusion when purchasing Specifications, the **number** **year,** and **name** of applicant for Letters Patent should be quoted.

Letters Patent Sealed.

Applications for enlargement of the time for payment of the renewal fee may be made on Form P.

The page and year quoted in last column refer to the Journal in which the notice of acceptance of Complete Specification was published.

Names of actual inventors, communicators, assignors, &c., who are not grantees, are added in parentheses after the name of the grantee.

No.	Date of Patent	Name of Grantee.	Abbreviated Title	Page and Year.
	1918.	*18th June, 1920.*		
7455*	22 May	Jessie M. McRae (*legal representative of* D. A. McRae, *deceased*), & W. Hart	Multiple furrow ploughs ..	533/*19*
	1919.	*25th June, 1920.*		
10,197	25 Feb.	Sundries Supply Co. Pty. Ltd. (D. F. Glynn)	Slipper for sadirons	281/*20*
	1918.	*26th June, 1920.*		
6441	4 Feb.	J. E. M. Flower & V. L. Green	Self-setting animal trap ..	281/*20*
	1917.			
9174	16 Aug.	E. C. Bayer & S. Orla-Jensen	Alcohol and yeast from seaweed ..	356/*20*
	1918.			
9564	19 Dec.	A. H. Thompson (E. J. Falkiner)	Paper cartons	85/*20*

* Extended time for Sealing allowed under Regulation 7 of the Patents (Temporary) Regulations, 1914. Cf. Notice "Applications in respect of which Complete Specifications have been Accepted, but on which Letters Patent have not been Sealed." Vol. 30, page 1493.

Letters Patent Sealed—*continued.*

No.	Date of Patent.	Name of Grantee.	Abbreviated Title.	Page and Year.
	1917.	*26th June, 1920*—continued.		
10,039	27 Dec.	J. J. Daniels	Safety train control	356/*20*
	1919.			
10,413	14 Mar.	I. Sutherland ..	Kinematography	356/*20*
10,422	15 Mar.	G. A. Sterling ..	Clothes-peg	356/*20*
	1918.			
10,517	15 Feb.	C. C. Feast	Wheel rim stand	356/*20*
	1919.			
10,536	25 Mar.	E. H. W. Crossley & W. Henderson	Bath attachment	356/*20*
10,974	5 May	H. Knecht & J. Scherrer	Changing the gauge of railway vehicles	356/*20*
11,504	7 Feb.	N. B. Hair	Opening tin cans	1459/*19*
11,659	3 July	E. A. Sperry (R. M. Harrington)	Lead salts	356/*20*
11,661	3 July	J. T. Thompson ..	Lubricating ammunition ..	281/*20*
	1918.	*28th June, 1920.*		
8944	12 Oct.	J. Docherty & J. Gillies	Metal polish	356/*20*
	1917.			
9382	20 Nov.	J. F. Wiedmer ..	Lathe attachments	356/*20*
	1919.			
9705	2 Jan.	J. H. Cutter	Cloth laying	356/*20*
9890	22 Jan.	C. W. Le Plastrier (C. Downs, R. A. Bellwood & T. W. Turnill)	Extracting oil	356/*20*
10,416	15 Mar.	P. Griffiths	Tuyere and hearth	356/*20*
10,903	1 May	V. R. Menon	Desk and cabinet	356/*20*
11,180	22 May	H. Burgess	Electric radiators	356/*20*
11,274	29 May	R. B. Brown	Gravity propelled vehicles ..	356/*20*
11,669	4 July	The International Earth-Boring Machine Co. (W. E. Moore)	Earth-boring machine	356/*20*
	1918.			
12,241	24 Aug.	C. West	Treating grain	356/*20*
	1919.			
12,762	3 Oct.	F. R. Arnett	Syringes	356/*20*
13,127	30 Oct.	W. J. Marsh	Mixing machines	356/*20*
	1918.	*29th June, 1920.*		
7425	20 May	A. H. Fyfe	Safety matches	281/*20*
	1919.			
10,290	3 Mar.	J. E. Muhlfeld & V. Z. Caracristi	Burning pulverized fuel ..	318/*20*
10,907	2 May	A. Gilbert	Book files	356/*20*

Letters Patent Sealed—*continued.*

No.	Date of Patent.	Name of Grantee.	Abbreviated Title.	Page and Year.
	1918.		*30th June, 1920.*	
9641	24 Dec.	Melbourne Co-operative Brewery Co. Ltd. (M. J. Lennon)	Delivering beer under pressure ..	245/*20*
	1919.			
10,072	10 Feb.	I. Crawcour	Thief-proof device for motor cars	245/*20*
10,075	10 Feb.	F. G. Barnes	Displaying illuminated advertisements	211/*20*
10,094	13 Feb.	G. W. Elliott & F. M. Clark	Domestic boiler stand	245/*20*
10,171	24 Feb.	A. Kagansky	Sole sewing machine	281/*20*
11,303	30 May	Benson Electric Co. (M. B. Benson)	Telemotors	245/*20*
12,138	15 Aug.	C. A. Stevens (C. G. Collins)	Separating sulphur from furnace gases	281/*20*
	1918.		*1st July, 1920.*	
10,262	13 Feb.	J. Parker & O. Mitchell	Concrete structures	1117/*19*
			3rd July, 1920.	
9547	18 Dec.	G. J. Ellis	Boring apparatus	1287/*19*
9669	30 Dec.	Stewart-Warner Speedometer Corp. (P. S. Tice)	Carburettors	356/*20*
	1919.			
10,280	3 Mar.	W. S. H. Doody ..	Heat non-conducting materials ..	245/*20*
10,289	3 Mar.	R. G. Crosbie	Box making apparatus	318/*20*
10,316	4 Mar.	John Sharp & Sons Ltd. (T. A. Bird)	Galvanized iron baths	245/*20*
10,558	27 Mar.	R. T. Kelly	Crutches for invalids	1287/*19*
11,334	2 June	Underwood Typewriter Co. (J. A. B. Smith)	Typewriting machines	356/*20*
	1918.			
11,527	25 June	A. A. Backhaus ..	Aeroplane motor fuel	318/*20*
	1919.			
11,645	3 July	International Corset Co. (M. B. Gardner)	Corset clasps	356/*20*
11,673	4 July	Chicago Flexible Shaft Co. (H. Kocourek)	Belt transmission	356/*20*
	1918.			
12,584	9 Dec.	A. W. MacIlwaine & G. F. Holdcroft	Extracting oil from volatile solvents	281/*20*
			5th July, 1920.	
9209	4 Nov.	F. L. Moll	Artificially incubating eggs ..	281/*20*
9263	13 Nov.	A. A. Schneider ..	Milking machines	385/*20*

Letters Patent Sealed—*continued.*

No.	Date of Patent.	Name of Grantee.	Abbreviated Title.	Page and Year.
	1919.	*5th July, 1920*—continued.		
10,716	9 Apr.	G. Milton	Animal traps	385/*20*
11,094	13 May	W. E. Goss (F. E. Wilson)	Sanitary toilet	385/*20*
11,146	19 May	Australian Mfg. & Importing Co. Ltd. (A. Bock)	Air gas machine	385/*20*
11,312	31 May	The Clemetsen Co. (J. Vaaler)	Typewriter desk	385/*20*
11,371	4 June	Elizabeth Hall & R. O'M. Walshe (Elizabeth Hall & A. L. Green)	Reinforced resilient articles	141/*20*
11,899	23 July	James Spicer & Sons Ltd. (J. S. Harley)	Yarn, twine, cord, &c.	385/*20*
12,041	6 Aug.	Auto-Ordnance Corp. (O. V. Payne)	Cartridge magazine	385/*20*
12,920	16 Oct.	C. E. Hardley, F. O. Andrews, & J. Murray	Dried milk conveyor	385/*20*
12,988	22 Oct.	John McIlwraith & Co. Pty. Ltd. (A. P. Kelly)	Domestic coppers	385/*20*

Applications in respect of which Complete Specifications have been Accepted, but on which Letters Patent have not been Sealed.

Names in parentheses indicate actual inventors, &c., who are not applicants.

No.	Date of Application.	Name of Applicant.	Abbreviated Title.	Page and Year.
	1918			
9434	3 Dec.	F. H. Stapleton & F. Lewis	Wardrobes	821/*19*

Assignments Registered.

1916.

1047. "Improvements in the process of distillation of tar, tar oils, carbolic acid, cresylic acid and like substances."

Assignment of whole interest *by* Wilfrid Russell GRIMWADE *to*

FELTON, GRIMWADE AND COMPANY PROPRIETARY LIMITED. Registered 29th June, 1920.

1918.

7643. "Improvements in respirators."

Assignment of whole interest *by* RIICHI WATANABE to

TOKYO SENSUI KOGYO KABUSHIKI KAISHA. Registered 29th June, 1920.

1919.

10,075. "Improvements in and relating to electrical apparatus for displaying illuminated advertisements and the like."

Assignment of whole interest *by* Franklin George BARNES *to*

Ronald Sutherland Murray MITCHELL. Registered 5th July, 1920.

Renewal Fees Paid.

(Names in parentheses indicate original grantees.)

1913.

No.	Name.	Abbreviated Title.	Paid up to—
9693	John Danks & Son Pty. Ltd.	Windmills	10th July, 1927
9733	Straker, C. E., & R. & W. Hawthorn, Leslie & Co. Ltd.	Combined crane locomotives ...	14th July, 1927
9736	McIntosh, J. C.	Internal combustion engines ..	14th July, 1927
9787	Hutchinson, G.	Fencing dropper and fastener ...	17th July, 1927
9885	Hansen, E. A.	Centrifugal pumps	24th July, 1927
9887	James J. Niven & Co. Ltd. ...	Fencing standard	24th July, 1927
10,182	Pook, P. W., Irwin, A. J. A., & Gelling, J. P. (Pook, P. W., & Whittle, W. J. M.)	Chaff baggers	18th Aug., 1927
10,415	Turnbull, W.	Flushing apparatus	4th Sept., 1927

Patents Void through Non-payment of Renewal Fees.

(Names in parentheses indicate original grantees.)

1912.

No.	Name.	Abbreviated Title.	Patent Ceased.
5493	Leister, E. C. & F. L. A. ...	Windmill mechanism	29th June, 1919
5494	Searle, H. S.	Tap and piercer for kerosene tins...	1st July, 1919
5497	Buzacott & Co. Ltd. (Walker, C. W.)	Pipe coupling	1st July, 1919
5502	Taylor, C. W., & Colegate, E. ...	Sealing boxes, &c.	15th July, 1918
5515	Cross, W. A.	Attaching tubular bodies to tanks, &c.	1st July, 1919
5518	Overend, J.	Sawing wood, &c.	1st July, 1919
5524	Chikanceff, A.	Stove closets	2nd July, 1919
5525	Anderson, W., Meikle, J., & Fulton, C. W.	Concentration, &c., of liquids ...	2nd July, 1919
5529	Port, F. W., & Pemberton, G. P.	Dust and draught preventer ...	2nd July, 1919
5530	Weiwoda, M.	Carburettors	2nd July, 1919
5535	Thomas Transmission Ltd. ...	Winding apparatus	2nd July, 1919
5537	Cairnes, J. E.	Decanting liquids	3rd July, 1919
5543	Shearer, J. A.	Ploughs	3rd July, 1919
5545	Raynes, J. J.	Internal combustion engines ..	5th July, 1918
5547	Hunter, J. D.	Regenerator for pasteurizing, &c.	4th July, 1919
5550	Wearn, J. S.	Soap holder	4th July, 1919
5551	Unbehaun, G. E.	Vehicle wheels	4th July, 1919
5553	Maggiora, D.	Solid tyres for vehicles	4th July, 1919
5565	Forsaith, A. E.	Vacuum cleaners	5th July, 1919
5568	Smith, B. S.	Wet dressing of sulphide ores ...	5th July, 1919

GEORGE TOWNSEND,
Commissioner of Patents.

Printed and Published for the DEPARTMENT OF PATENTS, COMMONWEALTH OF AUSTRALIA,
by ALBERT J. MULLETT, Government Printer for the State of Victoria.

DEPARTMENT OF PATENTS.—PRICE LIST OF PUBLICATIONS.

Patents, Trade Marks, and Designs Acts are on sale at the Government Printing Offices in Sydney, Brisbane, Adelaide, Perth, and Hobart.

Printed Specifications of Inventions and Regulations under Patents, Trade Marks, and Designs Acts are on sale at the Trade Marks Sub-offices, at Commonwealth Bank Buildings, Sydney, and at the Customs Houses, Brisbane, Adelaide, Perth, and Hobart.

Publications in the following list are on sale at the Government Printing Office Melbourne:—

	Price.		Price.
Patents Act 1903	8d.	Patents Act 1909	3d.
Patents Act 1906	3d.	Patents Act 1903–1909	1s.

		Price.
Patents, Trade Marks and Designs Act 1914 (No. 15)		3d.
Patents, Trade Marks and Designs Act (No. 2) 1914 (No. 16)		3d.
Patents, Trade Marks and Designs Act 1915 (No. 8)		3d
Patents Act (Partial Suspension) Act 1916 (No. 13)		3d.
Patents Regulations 1912		1s. 9d.
Statutory Rules 1914, Nos. 174, 188; 1916, Nos. 66, 220; 1919, Nos. 29, 30; 1920, No. 61	each	3d.
Commonwealth of Australia Gazettes—Patent Office Special Numbers. Nos. 34, 49, 52, 56, 60, 69, 72 of 1904; No. 2 of 1905	each	4d.
Classification of Manufactures and Word Index (edition of 1916, 280 pp.)		2s. 6d
Library Classed Catalogue, including supplement (*post free*)		1s.
THE AUSTRALIAN OFFICIAL JOURNAL OF PATENTS (*post free*)—		
Weekly Numbers, published every Tuesday	each	6d.
Annual Subscription (including Volume of Statistics and Indexes)		25s.
Complete Annual Volumes—		

Journals.	Indexes.	Journals.	Indexes.
...	Vol. 1, 1904	Vol. 16, 1912	Vol. 17, 1912
Vol. 2, 1905	Vol. 3, 1905	Vol. 18, 1913	Vol. 19, 1913
Vol. 4, 1906	Vol. 5, 1906	Vol. 20, 1914	Vol. 21, 1914
Vol. 6, 1907	Vol. 7, 1907	Vol. 22, 1915	Vol. 23, 1915
Vol. 8, 1908	Vol. 9, 1908	Vol. 24, 1916	Vol. 25, 1916
Vol. 10, 1909	Vol. 11, 1909	Vol. 26, 1917	Vol. 27, 1917
Vol. 12, 1910	Vol. 13, 1910	Vol. 28, 1918	Vol. 29, 1918
Vol. 14, 1911	Vol. 15, 1911	Vol. 30, 1919	Vol. 31, 1919

Vol. of Journal with corresponding Vol. of Indexes		25s
Vols. of Indexes only may be obtained at 7s. 6d. each from Vol. 1 to Vol. 17, and at 10s. each from Vol. 19 onwards		
PRINTED COPIES OF SPECIFICATIONS—		
Single copies (including postage)		1s.
Parcels of 30 specifications (exclusive of postage)		20s.
Specifications of one Group as issued (up to 80 copies), subscription in advance (exclusive of postage)		40s.
Complete sets as issued (exclusive of postage)	per copy	4d.
Average weight for parcels posted:—30 specifications, 1½ lbs.; 50, 3 lbs.; 100, 4 lbs.		
THE AUSTRALIAN OFFICIAL JOURNAL OF TRADE MARKS (*post free*)—		
Weekly Numbers, published every Friday	each	6d.
Annual Subscription (including Vol. of Name Index and Proceedings)		25s.
Complete Annual Volumes—Vols. 1 to 14, Applications and Proceedings.		
Name Index and Proceedings, Commonwealth and State—		
1906–7; 1908; 1909; 1910; 1911; 1912	each	7s. 6d
1913; 1914; 1915; 1916; 1917; 1918; 1919	each	..
Constituent Particulars of Trade Marks—		

Vol. 1, 1906–7	7s. 6d.	Vol. 7, 1914	7s. 6d.
Vol. 2, 1907–9	15s.	Vol. 8, 1915	7s. 6d.
Vol. 3, 1909–10	11s. 6d.	Vol. 9, 1916	7s. 6d.
Vol. 4, 1911	7s. 6d.	Vol. 10, 1917	7s. 6d.
Vol. 5, 1912	7s. 6d.	Vol. 11, 1918	7s. 6d.
Vol. 6, 1913	7s. 6d.	Vol. 12, 1919	7s. 6d.
Trade Marks Act 1905	8d.	Trade Marks Act 1905–1912	8d.
Trade Marks Act 1919 (No. 7)	3d.		

Trade Marks Regulations 1913		1s. 3d.
Trade Marks Rules—Statutory Rules 1914, Nos. 8, 175, 189; 1916, Nos. 64, 97, 221	each	3d.
Designs Act 1906 ... 5d. | Designs Act 1912		3d.
Designs Regulations 1906		5d.
Designs Rules—Statutory Rules 1914, Nos. 176, 190; 1916, Nos. 65, 222; 1919, 228	each	3d.
Designs Indexes—1909, 1910, 1911, 1912, 1913, 1914, 1915, 1916, 1917, 1918, and 1919	each	1s.

Application Forms according to the Schedules to the Patents Act 1903-1909, Trade Marks Act 1905-1912, Designs Act 1906-1912 and the Patents, Trade Marks and Designs Act 1914-1915, may be obtained on application at the Department of Patents, Second Floor Railway Buildings, Flinders-street, Melbourne.

NOTICE.

Sections 106 and 107 of the *Patents Act* 1903–1909 provide that—

"106. Every person whose name is enrolled in the Register of Practitioners to be kept at the Principal Registry of the High Court or whose name is enrolled as a solicitor of the Supreme Court of a State may practise as a patent attorney without passing the prescribed examination and without being registered as a patent attorney."

"107. No person shall practise or act or describe himself as a patent attorney or as a patent agent or as an agent for obtaining patents unless he is registered or entitled to practise as a patent attorney under this Act.

Penalty: One hundred pounds."

Regulations 155 and 156 of the Patents Regulations 1912 provide that—

"155. A Register shall be kept by the Commissioner for the Registration of Patent Attorneys."

"156. Patent attorneys shall be entitled to prepare all documents and deeds and transact all business and proceedings for the purposes of the Act and these Regulations and the State Patents Act so far as concerns business in the Patent Office or before the Law Officer, and communications between Patent Attorneys and their clients shall be privileged to the same extent as communications between solicitor and client."

An applicant for a patent or a party to any matter before the Department of Patents may prepare the necessary documents for presentation to, and prosecute the application or matter before, the Department, but, unless experienced in these matters, he is advised to employ a competent patent attorney.

The Department of Patents does not assist in the selection of a patent attorney.

A list of registered patent attorneys, alphabetically arranged, is subjoined:—

Abell, Edward Garland, 187 Queen-street, Brisbane, Qld.

Allen, Thomas Con, Equitable Buildings, George-street, Sydney, New South Wales.

Anderson, Alexander (*Charles E. Bernays*), Fitzroy Buildings, 125 Adelaide-street, Brisbane, Queensland.

Ashton, William A., care of Clem. A. Hack, Collins House, Collins-street, Melbourne, Victoria.

Bayston, Frank (*W. S. Bayston and Son*), Market Buildings, 441 Collins-street, Melbourne, Victoria.

Bayston, Walter Smythe (*W. S. Bayston and Son*), Market Buildings, 441 Collins-street, Melbourne, Victoria.

Bernays, Charles Edwin (*Charles E. Bernays*), Fitzroy Buildings, 125 Adelaide-street, Brisbane, Queensland.

Bodycomb, George Edward, 282 High-street, St. Kilda, Victoria.

Bonnerup, Peter Madsen, A.M.P. Chambers, St. George's Terrace and William-street, Perth, Western Australia.

Burgess, Charles Stanley, 49 William-street, Norwood, South Australia.

Callinan, Anthony James, National Mutual Buildings, 395 Collins-street, Melbourne, Victoria; and Ferry's Chambers, 14 Castlereagh-street, Sydney, New South Wales.

Collison, Arthur Gore (*Collison and Co.*), Eagle Chambers, King William-street, Adelaide, South Australia; and 483 Collins-street, Melbourne, Victoria.

Collison, Charles Nicholas (*Collison and Co.*), 483 Collins-street, Melbourne, Victoria; and Eagle Chambers, King William-street, Adelaide, South Australia.

Cooke, John Herbert, 75 King William-street, Adelaide, South Australia.

Davis, William Joseph, Bull's Chambers, 14 Moore-street, Sydney, New South Wales.

Graham, Charles Edward (*Edwd. Waters and Sons*), Culwulla Chambers, 67 Castlereagh-street, Sydney, N.S.W.; and Royal Insurance Buildings, 414–418 Collins-street, Melbourne, Victoria.

Griffith, Arthur (*Griffith and Hassel*), Record Chambers, 77 Castlereagh-street, Sydney, New South Wales.

Hack, Clement Alfred, Collins House, Collins-street, Melbourne, Victoria.

Hedges, Percy (*Hedges and Co.*), Fink's Buildings, Elizabeth and Flinders streets, Melbourne, Victoria.

Hendley, Sidney, Fink's Buildings, Elizabeth and Flinders streets, Melbourne, Victoria.

Hepburn, Charles Graham, Gladstone Chambers, 90 Pitt-street, Sydney, New South Wales.

Kelson, Victor Jasper, 17 Queen street, Melbourne, Vic.

Le Plastrier, Cecil Woods (*Phillips, Ormonde (Inc.) Pty. Ltd.*), Lombard Buildings, 17 Queen-street, Melbourne, Vic.

Madden, Augustine Thomas, 454 Collins-street, Melbourne, Victoria.

Manners, William George, corner of Maritana and Egan streets, Kalgoorlie, Western Australia.

Massey, Albert Richard William, Challis House, Martin-place, Sydney, New South Wales.

Massey, George, Post Office Chambers, Pitt-street, Sydney, New South Wales.

Michell, Anthony George Maldon, 450 Collins-street, Melbourne, Victoria.

Monash, John, Collins House, 360 Collins-street, Melbourne, Victoria.

Neighbour, Arthur George Lloyd, care of Anthony James Callinan, 395 Collins-street, Melbourne, Victoria; and 14 Castlereagh-street, Sydney, New South Wales.

Newell, Percy Harwood, care of Fred Walsh, George and Wynyard streets, Sydney, New South Wales.

Newton, Perceval Manfield, Fink's Buildings, Elizabeth-street, Melbourne, Victoria; and Challis House, Martin-place, Sydney, New South Wales

Newton, William Manfield, Challis House, Martin-place, Sydney, New South Wales.

Phillips, Edwin (*Phillips, Ormonde (Inc.) Pty. Ltd.*), Lombard Buildings, 17 Queen-street, Melbourne, Victoria.

Sachse, Arthur Otto, 454 Collins-street, Melbourne Victoria.

Sigmont, Walter (*Edwd. Waters and Sons*), Royal Insurance Buildings, 414-418 Collins-street, Melbourne, Victoria and Culwulla Chambers, 67 Castlereagh-street, Sydney, New South Wales.

Smith, Hider, 95-97 Swan-street, Richmond, Melbourne, Victoria.

Sparrow, Richard, Austral Chambers, Barrack-street, Perth, Western Australia.

Spruson, Wilfred Joseph, "Daily Telegraph" Buildings, King-street, Sydney, New South Wales.

Stone, John Jasper, 30 Drummoyne-avenue, Drummoyne, Sydney, New South Wales.

Turri, George Garibaldi (*G. G. Turri and Co.*), "The Rialto," 497-499 Collins-street, Melbourne, Victoria.

U'Ren, George Albert (*Phillips, Ormonde (Inc.) Pty. Ltd.*), Lombard Buildings, 17 Queen-street, Melbourne, Victoria.

Walker, William, 156 King-street, Sydney, N.S.W.

Walsh, Fred, George and Wynyard streets, Sydney, New South Wales.

Waters, Edward (*Edwd. Waters and Sons*), Royal Insurance Buildings, 414-418 Collins-street, Melbourne, Victoria; and Culwulla Chambers, 67 Castlereagh-street, Sydney, New South Wales

147

Vol. 32.] 1920. [No. 27.

Tuesday, 20th July.

[Registered at the General Post Office, Melbourne, for transmission by post as a newspaper.]

THE
Australian Official Journal of Patents.

PRICE (including postage):—Single Copy, 6d. Annual Subscription (including volume of Statistics and Indexes), 25s. Obtainable at the Government Printing Office, Melbourne.

By Authority:
Albert J. Mullett, Government Printer, Melbourne.

C.11920.

The Supreme Obligation

Which rests on every Australian citizen is to help in the work of Repatriation. The boys have done their part; it is our turn now. Australia has the opportunity of setting an example to the world in a just and generous treatment of the returned soldier. Everyone can help in discharging this great obligation by investing in the new issue of

War Savings Certificates

£5 3s. per cent. Compound Interest.

HOW THE MONEY GROWS

12s. will make **£1** in 10 years
£6 will make **£10** in 10 years
£60 will make **£100** in 10 years
15s. 6d. will make **£1** in 5 years
£7 15s. will make **£10** in 5 years
£77 10s. will make **£100** in 5 years

War Savings Certificates

£5 3s. per cent. Compound Interest.

By purchasing the New Issue of War Savings Certificates an absolutely safe investment is secured together with a liberal rate of interest. The Certificates, in case of need, can be cashed at any time at any Bank.

NOW ON SALE AT ALL BANKS AND POST OFFICES

For further information write to the Secretary, Victorian War Savings Committee, 123 Queen Street, Melbourne.

The Australian Official Journal of Patents

[Registered at the General Post Office, Melbourne, for transmission by post as a newspaper.]

Vol. 32.] 20th July, 1920. [No. 27.

All communications to be addressed to the Commissioner of Patents, Railway Buildings, Melbourne, Victoria.

[The Department of Patents does not guarantee the accuracy of its publications, or undertake any responsibility for errors or omissions or their consequences.]

CONTENTS.

Notices— Page

Warning to the Public 979
Examination of Candidates for Registration as Patent Attorneys 980
Rule of Practice 981
Official Circulation 981

Commonwealth—

Applications Received 982
Corrigenda 994
Provisional Specifications Accepted 995
Application for Patent dated other than Date of Lodgment 995
Complete Specifications Lodged 996
Applications with Provisional Specifications Lapsed, Abandoned, or Withdrawn ... 997

Commonwealth—*continued.* Page

Applications with Complete Specifications (not open to Public Inspection) Lapsed, Refused, Abandoned, or Withdrawn ... 997
Specifications open to Public Inspection before Acceptance 998
Complete Specifications Accepted ... 999
Illustrated Notes 1000
Commonwealth Specifications 1027
Letters Patent Sealed 1029
Assignments Registered 1030
Licence Registered 1032
Renewal Fees Paid 1032
Patents Void through Non-payment of Renewal Fees 1033

NOTICES.

WARNING TO THE PUBLIC.

The Public are notified that entries in the *Australian Official Journal of Patents* under the headings—

Applications with Provisional Specifications Lapsed.
Applications with Complete Specifications Lapsed.
Applications with Complete Specifications (open to public inspection) Lapsed.
Applications in respect of which Complete Specifications have been Accepted but on which Letters Patent have not been Sealed.
Patents void through non-payment of Renewal Fees.

must not be accepted as final, as under Regulations 7 and 8 of the Patents (Temporary) Regulations 1914 the Minister or the Commissioner may in certain cases defined in the Regulations extend the time prescribed by the *Patents Act* 1903-1909 for doing any act or filing any document.

The Patent Office will furnish, on request accompanied by the prescribed search fee of One Shilling, definite information, so far as possible, as to the position of any particular Application or Patent.

C.11920.

NOTICES—*continued.*

Examination of Candidates for Registration as Patent Attorneys.

It is hereby notified for public information that an examination of candidates for registration as patent attorneys will be held at the Patent Office, Melbourne, and elsewhere as the Board directs, on the 23rd, 24th, 25th, 26th, and 27th August, 1920.

The attention of Candidates intending to present themselves for examination is directed to Regulations Nos. 175 and 181A of the Patents Regulations 1912 under the *Patents Act* 1903–1909, which provides that—

> 175. Every person who intends to present himself for examination shall, at least 30 days *before the date appointed for holding the examination*, lodge with the Secretary a notice in accordance with Form CC, a declaration in accordance with Form DD, and a certificate in accordance with Form EE, and pay the prescribed examination fee.
>
> 181A. In the case of any prescribed subject in which examinations are conducted by any University in Australia, the Board may, if it thinks fit, instead of requiring a candidate to undergo examination in that subject by the Board under these Regulations, accept the certificate of the University that the candidate has satisfied the University in that subject, provided that the Board is satisfied that the standard of the examination is sufficient for the purposes of these Regulations.

The fee for examination is £2.

CHARLES GIBSON,
Secretary,
Board of Examiners of Patent Attorneys.

Patent Office, Melbourne,
13th July, 1920.

TIME-TABLE FOR EXAMINATION.

Day.	Hour.	Subject.
Monday, 23rd August, 1920	9.30 a.m. to 12.30 p.m	Patent and Trade Marks Law of the Commonwealth, and the Practice of the Patent Office.
	2 p.m. to 5 p.m.	The preparation of a Specification to be attached to an Application for any kind of invention named by the Board.
Tuesday, 24th August, 1920	9.30 a.m. to 12.30 p.m.	Patent and Trade Marks Case Law. (Inclusive of the decisions of the High Court of Australia.)
	2 p.m. to 5 p.m.	The Patent and Trade Marks Law and Practice of England and other countries.
Wednesday, 25th August, 1920	9.30 a.m. to 12.30 p m.	Criticism and Interpretation of Specifications.
	2 p.m. to 5 p.m.	Applied Mechanics.
Thursday, 26th August, 1920	9.30 a.m. to 12.30 p.m.	Chemistry
	2 p.m. to 5 p.m.	Preparation of a Drawing from a hand sketch.
Friday, 27th August, 1920	9.30 a.m. to 12.30 p.m	Manufacturing Processes and Apparatus.

NOTICES—*continued.*

Rule of Practice.

EXAMINATION OF APPLICATION AND SPECIFICATION.

The examination in accordance with Sections 39 and 41 of the *Patents Act* 1903-1909 of an application and specification will not be proceeded with until the application for the patent consists of the following documents :—(1) Form of application; (2) Provisional or Complete Specification with true copy thereof; (3) Drawings (if referred to in the specification) prepared on paper prescribed by the Patents Regulations 1912 with a true copy thereof prepared on paper or tracing cloth; and (4) In the case of an application made in terms of Section 121, (*a*) a copy or copies of the specification or specifications and drawings, or documents corresponding thereto, filed or deposited by the applicant in the Patent Office of the Foreign State or British Possession in respect of the first foreign application, certified in the manner provided by Rules of Practice; and (*b*) If the specification or other document required under (*a*) is in a foreign language, a translation thereof verified in the manner provided by Rules of Practice.

The examination in accordance with Sections 39, 40, and 41 of the Patents Act of a complete specification, lodged in connection with an application for a patent accompanied by a provisional specification, will not be proceeded with until the specification is accompanied by a true copy thereof and drawings (if referred to in the specification) prepared on paper prescribed by the Patents Regulations 1912 with a true copy thereof prepared on paper or tracing cloth.

R. G. FERGUSON,
Deputy Commissioner of Patents.

Official Circulation.

The *Australian Official Journal of Patents* is available for free public inspection at the Trade Marks Sub-offices, at Commonwealth Bank Buildings, Sydney, and at the Customs Houses in Brisbane, Adelaide, Perth, and Hobart on the arrival of the first post after its publication at the Patent Office in Melbourne. Complete files are posted to Government Patent Offices in all parts of the world, and to a large number of Public Libraries and Technical Institutions in the principal cities of Australasia, Great Britain, Europe, America, Africa, and Asia. The *Journal* may also be inspected at the offices of many technical periodicals to which copies are sent in exchange.

COMMONWEALTH.

PROCEEDINGS UNDER THE "PATENTS ACT 1903-1909."

List of Applications for Letters Patent received from 8th to 14th July, 1920.

The abbreviations "Prov." and "Comp." after the numbers indicate respectively that a Provisional or Complete Specification was lodged with the Application.

Thursday, 8th July.

16,456. *Prov.* William Berry HOLLAND—

"Method of removing wet concrete or other material from belt or other type conveyors."

16,457. *Prov.* Edward T. McELLISTER—

"Holdfast window fastener."

16,458. William Comings WHITE.

[Date applied for under International or Intercolonial Arrangements, 8th July, 1919, being date of application in United States of America.]

"Amplifying current."

16,459. *Prov.* Arthur Horace Lindsay LOWE—

"Improved brine pumping plant."

16,460. *Prov.* Edward William WILSON—

"Improvements relating to lithography and printing in colors."

16,461. Willy VON UNRUH.

[Date applied for under International or Intercolonial Arrangements, 9th Feb., 1920, being date of application in Germany, No. U. 6906.]

"A process for treating steel wire."

16,462. *Comp.* MASCHINENFABRIK ESSLINGEN, *assignee of* Fritz GREINER, *act. inv.*—

"Process for protecting iron alloyed with a high percentage of silicium, manganese, phosphorus or like ingredients against burning when smelted."

16,463. Eugène Henri TARTRAIS.

[Date applied for under International or Intercolonial Arrangements, 3rd Dec., 1917, being date of application in France, No. 488,098.]

"Improvements in fuel and like pumps."

16,464. Eugène Henri TARTRAIS.

[Date applied for under International or Intercolonial Arrangements, 3rd Dec., 1917, being date of application, in France, No. 488,099.]

"Improvements in atomisers for liquid fuel engines."

16,465. Eugène Henri TARTRAIS.

[Date applied for under International or Intercolonial Arrangements, 3rd Dec., 1917, being date of application in France, No. 488,100.]

"Improvements in liquid fuel engines."

16,466. Eugène Henri TARTRAIS.

[Date applied for under International or Intercolonial Arrangements, 3rd Dec., 1917, being date of application, in France, No. 488,101.]

"Improvements in two stroke liquid fuel engines."

16,467. Camille SENG.

[Date applied for under International or Intercolonial Arrangements, 24th Feb., 1914, being date of application in France, No. 468,869.]

"Instantaneous preparatory junction for fluids under pressure and application of same for greasing under pressure."

Applications received, 8th to 14th July—*continued.*

16,468. Camille Seng.

[Application for Patent of Addition. Date applied for under International or Intercolonial Arrangements, 23rd Dec., 1914, being date of application in France, No. 20,083/*14*.]

"Instantaneous preparatory junction for fluids under pressure and application of same for greasing under pressure."

16,469. *Prov.* Alexander Fraser—

"Improved fruit grader."

16,470. *Prov.* Clara Sophia Liggins—

"An adjustable spring steel tyre for the wheels of vehicles, bicycles and the like."

16,471. *Prov.* Reginald Stanley York, *communicatee of* Stanley Walker, *act. inv* —

"Improved axle-box lubricating pad."

16,472. *Prov.* George Neale—

"Improved sectional-tread resilient wheel."

16,473. *Prov.* Richard Scott Sindell—

"Improvements in screw-down valves."

16,474. Lipa Polinkowsky and William H. Matthies.

[Date applied for under International or Intercolonial Arrangements, 14th June, 1919, being date of application in United States of America, No. 304,212/*19*.]

"Improvements in or relating to telephone systems."

16,475. Berthe Vandenbroucque and E. Mathon & Dubrulle Fils.

[Date applied for under International or Intercolonial Arrangements, 8th Apr., 1919, being date of application in France.]

"Improved process and machine for effecting the automatic drawing-in of warp threads into loom heddles."

16,476. Gilbert S. Vernam.

[Date applied for under International or Intercolonial Arrangements, 13th Dec., 1918, being date of application in United States of America, No. 253,962/*18*.]

"Telegraphic ciphering and deciphering mechanism."

16,477. John Daniel Ochterbeck.

[Date applied for under International or Intercolonial Arrangements, 12th Jan., 1914, being date of application in United States of America, No. 1,189,471.]

"Improvement in crushing machines."

16,478. Harold De Forrest Arnold.

[Date applied for under International or Intercolonial Arrangements, 1st Dec., 1915, being date of application in United States of America, No. 64,502/*15*.]

"Improvements in or relating to wireless telephone systems."

16,479. Lyman F. Morehouse.

[Date applied for under International or Intercolonial Arrangements, 4th Dec., 1918, being date of application in United States of America, No. 265,307/*18*.]

"Telegraphic ciphering and deciphering mechanisms."

16,480. Lipa Polinkowsky.

[Date applied for under International or Intercolonial Arrangements, 14th June, 1919, being date of application in United States of America, No. 304,144/*19*.]

"Improvements in telephone systems."

16,481. John Frederick Robert Troeger.

[Date applied for under International or Intercolonial Arrangements, 24th Dec., 1913, being date of application in United States of America.]

"Improvements in and relating to screens for projecting machines."

16,482. John Frederick Robert Troeger.

[Date applied for under International or Intercolonial Arrangements, 24th Dec., 1913, being date of application in United States of America.]

"Improvements in and relating to translucent exhibition screens for projecting machines."

16,483. Harry Douglas Rohman and Frank R. Peters.

[Date applied for under International or Intercolonial Arrangements, 16th Feb., 1917, being date of application in United States of America, No. 1,259,672.]

"Improvements in and connected with brush gear for dynamos and motors."

Applications received, 8th to 14th July—*continued.*

16,484. *Comp.* Bancroft GHERARDI—

"Improvements in or relating to signalling systems."

16,485. *Prov.* Sydney Hugh RABBITS—

"Silent cistern refiller."

16,486. *Prov.* Leo Augustus BRIAN and Wallace Dalkeith MORRISON—

"Combustion turbine or rotary motor."

16,487. *Prov.* George LAWLER—

"An improved heel grip for shoes."

16,488. EISEN & STAHLWERKE, formerly Georg Fischer.

[Date applied for under International or Intercolonial Arrangements, 13th Dec., 1913, being date of application in Switerland, No. 67,513.]

"Improvements in an automatic funnel coupling for vehicles."

16,489. Irvine BROOK.

[Date applied for under International or Intercolonial Arrangements, 7th Feb., 1917, being date of application in Great Britain, No. 117,466.]

"Improvements in or relating to non-slipping or the like devices for resilient tyres for the wheels of road vehicles."

16,490. William RUSSELL, M.I.M.M.

[Date applied for under International or Intercolonial Arrangements, 21st Jan., 1918, being date of application in Great Britain, No. 122,454.]

"Improvements in or relating to coal washing and apparatus therefor."

16,491. Edwin EDSER, Henry Livingstone SULMAN, and Frank Butler JONES.

[Date applied for under International or Intercolonial Arrangements, 20th Nov., 1919, being date of application in Great Britain, No. 28,832/*19*.]

"Improvements in or relating to the treatment of materials containing coal."

16,492. Walter BROADBRIDGE, Edwin EDSER, William Warwick STENNING, and MINERALS SEPARATION LIMITED.

[Date applied for under International or Intercolonial Arrangements, 26th Aug., 1919, being date of application in Great Britain, No. 20,891/*19*.]

"Improvements in or relating to the production of coal briquettes."

16,493. *Comp.* James Patrick BREHENY—

"Improvements in beer-cooling apparatus."

Friday, 9th July.

16,494. *Prov.* Leslie Joseph SMITH—

"Improvements relating to the destruction of parasitic pests on trees, shrubs, and the like."

16,495. *Prov.* Donald Victor McKAY, *act. inv.*, and Thomas Albert TAYLOR, *assignee*—

"Improvements in grinding mills."

16,496. *Prov.* Joseph PIERCY—

"Device for use in floor cleaning."

16,497. *Comp.* Charles John WESTERN—

"An improved construction of grubber."

16,498. *Prov.* Percy Edward CORRELL—

"Improvements in and relating to 'screens' and 'sheets' and the like for the reception of pictures, images and the like."

16,499. William C. TYLER.

[Date applied for under International or Intercolonial Arrangements, 30th Mar., 1918, being date of application in United States of America, No. 1,298,124.]

"Tire making structure."

16,500. William C. TYLER.

[Date applied for under International or Intercolonial Arrangements, 27th June, 1918, being date of application in United States of America, No. 1,320,295.]

"Tire making machine."

Applications received, 8th to 14th July—*continued.*

16,501. William B. HARSEL.

[Date applied for under International or Intercolonial Arrangements, 20th July, 1918, being date of application in United States of America, No. 1,327,910.]

"Tire making machine."

16,502. Edwin G. TEMPLETON.

[Date applied for under International or Intercolonial Arrangements, 27th Nov., 1918, being date of application in United States of America, No. 1,338,407.]

"Tire making machine."

16,503. *Prov.* James ROBERTSON—

"Improved machine for eradicating weeds and digging potatoes and the like."

16,504. Frank WILCOMB.

[Date applied for under International or Intercolonial Arrangements, 14th Apr., 1914, being date of application in United States of America, Serial No. 831,797/*14*.]

"Improvement in spring needle knitting machine."

16,505. Eugene Martin GUNNING.

[Date applied for under International or Intercolonial Arrangements, 4th June, 1914, being date of application in United States of America, Serial No. 843,055/*14*.]

"Improvement in pick block adjustment for knitting machines."

16,506. George Pliney BOSWORTH.

[Date applied for under International or Intercolonial Arrangements, 31st Aug., 1914, being date of application in United States of America, Serial No. 859,492/*14*.]

"Improvement in stocking knitting machine, antiravelling."

16,507. Emile BEDARD.

[Date applied for under International or Intercolonial Arrangements, 31st Aug., 1915, being date of application in United States of America, Serial No. 48,233/*15*.]

"Improvement in knitting machine for making antiravel courses in hosiery."

16,508. George Pliney BOSWORTH.

[Date applied for under International or Intercolonial Arrangements, 20th Sept., 1915, being date of application in United States of America, Serial No. 51,656/*15*.]

"Improvement in spring needle knitting machine."

16,509. George Pliney BOSWORTH.

[Date applied for under International or Intercolonial Arrangements, 29th June, 1915, being date of application in United States of America, Serial No. 37,022/*15*.]

"Improvements in knitting machines."

16,510. George Pliney BOSWORTH.

[Date applied for under International or Intercolonial Arrangements, 5th May, 1916, being date of application in United States of America, Serial No. 95,642/*16*.]

"Improvement in knitting machine."

16,511. Thomas Noton FLETCHER.

[Date applied for under Intercolonial Arrangements, 24th May, 1916, being date of application in New Zealand, No. 37,492.]

"Improvements in combined milking machine releasers and pulsators."

16,512. Thomas Noton FLETCHER.

[Date applied for under Intercolonial Arrangements, 28th June, 1916, being date of application in New Zealand, No. 37,616.]

"Improvements in milking machine releasers."

16,513. *Prov.* James Joseph MIDSON—

"Improvements in and relating to bottles."

16,514. Harald J. VENNES.

[Date applied for under International or Intercolonial Arrangements, 28th Apr., 1919, being date of application in United States of America, No. 293,055/*19*.]

"Harmonic generator or regenerator."

16,515. *Comp.* Pierre Andre Paul Victor MAUCLERE—

"System and safety apparatus for the storage and the distribution of inflammable and other liquids in air tight reservoirs and piping."

Applications received, 8th to 14th July—*continued.*

16,516. Pierre Samain.

[Date applied for under International or Intercolonial Arrangements, 19th Oct., 1917, being date of application in France, No 488,748.]

"Improvement in fluid delivery regulator for fluids under pressure, automatically cutting off the piping in case of bursting."

16,517. Pierre Samain.

[Date applied for under International or Intercolonial Arrangements, 6th Mar., 1919, being date of application in France.]

"Improvements in automatic gates for sluices."

16,518. John Brandwood and Arthur Thill.

[Date applied for under International or Intercolonial Arrangements, 3rd Apr., 1919, being date of application in Belgium.]

"Improvements in and relating to rubber soles and heels for boots or shoes."

16,519. Léon Turcat.

[Date applied for under International or Intercolonial Arrangements, 6th Mar., 1919, being date of application in France.]

"Improvements relating to automatic telephony."

16,520. Eugène Henri Tartrais.

[Date applied for under International or Intercolonial Arrangements, 9th Dec., 1918, being date of application in France.]

"Two stroke liquid fuel engine."

16,521. Antoine France and Paul Habets.

[Date applied for under International or Intercolonial Arrangements, 12th Aug., 1913, being date of application in Belgium.]

"Improvements in apparatus for wash-coal and other minerals."

16,522. Antoine France.

[Date applied for under International or Intercolonial Arrangements, 19th June, 1915, being date of application in Belgium.]

"Improvements in wet sorting apparatus."

16,523. Antoine France.

[Date applied for under International or Intercolonial Arrangements, 4th Sept., 1919, being date of application in Belgium.]

"Improvements in wet sorting apparatus."

16,524. Antoine France and Paul Habets.

[Date applied for under International or Intercolonial Arrangements, 8th Dec., 1915, being date of application in Germany.]

"Improvements in apparatus for washing and sorting coal and other minerals."

16,525. Antoine France.

[Date applied for under International or Intercolonial Arrangements, 20th Aug., 1919, being date of application in Belgium.]

"Improvements in and connected with coal or other mineral washing apparatus."

16,526. James B. Kirby.

[Date applied for under International or Intercolonial Arrangements, 19th July, 1918, being date of application in United States of America, No. 40,555/*18*.]

"Improvements in washing machines."

16,527. *Prov.* Robert Walter Carter—

"Improvements in gas producer furnaces."

Saturday, 10th July.

16,528. Patent-Treuhand Gesellschaft für elektrische Glühlampen mit beschränkter Haftung m.b.H., *assignee of* Die Deutsche Gasglühlicht Aktiengesellschaft (Auergesellschaft) in Berlin.

[Date applied for under International or Intercolonial Arrangements, 27th Sept., 1915, being date of application in Germany, No. D.32,052.]

"Method of and apparatus for evacuating the bulbs of electric incandescent lamps and other glass vessels."

16,529. Ernst Fredrick Werner Alexanderson.

[Date applied for under International or Intercolonial Arrangements, 4th May, 1918, being date of application in United States of America.]

Applications received, 8th to 14th July—*continued.*

16,530. — Fuller.

[Application under International or Intercolonial Arrangements.]

"Improvements in metal drawing dies."

16,531. — Wright.

[Application under International or Intercolonial Arrangements.]

"Improvements in shaping filaments for electric lamps."

16,532. — Van Keuren.

[Application under International or Intercolonial Arrangements.]

"Improvements in hermetic seals for leading-in wires of electric lamps."

16,533. William Comings White.

[Date applied for under International or Intercolonial Arrangements, 23rd Aug., 1915, being date of application in United States of America.]

"Improvements in and relating to wireless signalling systems."

16,534. Saul Dushman.

[Date applied for under International or Intercolonial Arrangements, 20th Feb., 1915, being date of application in United States of America.]

"Improvements in electron discharge vacuum tubes."

16,535. Albert Wallace Hull.

[Date applied for under International or Intercolonial Arrangements, 8th Nov., 1915, being date of application in United States of America.]

"Improvements in and relating to means for producing alternating currents."

16,536. Alfred N. Goldsmith.

[Date applied for under International or Intercolonial Arrangements, 18th Jan., 1917, being date of application in United States of America.]

"Improvements in and relating to wireless signalling systems."

16,537. Ernst Fredrik Werner Alexanderson.

[Date applied for under International or Intercolonial Arrangements, 4th Sept, 1917, being date of application in United States of America.]

"Improvements in and relating to wireless signalling systems."

16,538. Ernst Fredrik Werner Alexanderson.

[Date applied for under International or Intercolonial Arrangements, 11th Apr., 1918, being date of application in United States of America.]

"Improvements in means for controlling alternating electric currents."

16,539. Chester W. Rice.

[Date applied for under International or Intercolonial Arrangements, 31st July, 1917, being date of application in United States of America.]

"Improvements in methods of and apparatus for the amplification of small currents by electron discharge relays."

16,540. Alfred N. Goldsmith and Julius Weinberger.

[Date applied for under International or Intercolonial Arrangements, 23rd Mar., 1918, being date of application in United States of America.]

"Improvements in and relating to wireless signalling systems."

16,541. Irving Langmuir.

[Date applied for under International or Intercolonial Arrangements, 5th June, 1919, being date of application in United States of America.]

"Electrical signalling system."

16,542. Chester W. Rice.

[Date applied for under International or Intercolonial Arrangements, 5th June, 1919, being date of application in United States of America.]

"Signalling systems."

16,543. Chester W. Rice.

[Date applied for under International or Intercolonial Arrangements, 11th Feb., 1919, being date of application in United States of America.]

"Amplifying currents."

Applications received, 8th to 14th July—*continued.*

16,544. Ernst Fredrik ALEXANDERSON.

[Date applied for under International or Intercolonial Arrangements, 15th Feb., 1918, being date of application in United States of America.]

"Radio signalling systems."

16,545. Alfred N. GOLDSMITH and Julius WEINBERGER.

[Date applied for under International or Intercolonial Arrangements, 11th Feb., 1919, being date of application in United States of America.]

"Radio signalling systems."

16,546. THE BRITISH THOMSON-HOUSTON COMPANY LIMITED and Frank Percy WHITAKER.

[Date applied for under International or Intercolonial Arrangements, 20th Apr., 1916, being date of application in Great Britain, No. 107,993.]

"Improvements relating to dynamo-electric machines."

16,547. John Franklin TRITLE.

[Date applied for under International or Intercolonial Arrangements, 25th June, 1918, being date of application in United States of America.]

"Improvements in and relating to controllers."

16,548. Daniel McFarlan MOORE.

[Date applied for under International or Intercolonial Arrangements, 30th Nov., 1917, being date of application in United States of America.]

"Improvements in and relating to gaseous-conduction lamps."

16,549. TH. GOLDSCHMIDT A.-G.

[Date applied for under International or Intercolonial Arrangements, 25th July, 1918, being date of application in Germany.]

"Process for the preparation of solid substances with properties specially suitable for certain chemical operations."

16,550. Friedrich Wilhelm BINDEL.

[Date applied for under International or Intercolonial Arrangements, 7th Apr., 1919, being date of application in Germany, No. B.89,036.]

"Method and device for welding chain-links, rings and the like."

16,551. DR. ING. & C. A. SCHNEIDER.

[Date applied for under International or Intercolonial Arrangements, 9th Mar., 1918, being date of application in Germany, No. F.42,923.]

"Lubrication roller bearing for railway vehicles and the like."

16,552. Lucien LEVY.

[Date applied for under International or Intercolonial Arrangements, 4th Aug., 1917, being date of application in France.]

"Improvements in or relating to electrical transmission particularly applicable to radio- telegraphy and telephony."

16,553. Lucien LEVY.

[Date applied for under International or Intercolonial Arrangements, 1st Oct., 1918, being date of application in France.]

"Antiparasitic receiving and selecting system for telegraphy and telephony with or without wires."

16,554. METALLURGICAL ELECTRIC COMPANY, formerly VEDOVELLI, PRIESTLEY & Co.

[Date applied for under International or Intercolonial Arrangements, 19th Feb., 1914, being date of application in France, No. 468,735.]

"Chain suspension for electric traction lines."

16,555. August HUND.

[Date applied for under International or Intercolonial Arrangements, 18th Sept., 1914, being date of application in United States of America.]

"Improvements in and relating to wireless signalling systems."

16,556. Horace P. CHAMBERLAIN.

[Date applied for under International or Intercolonial Arrangements, 20th Oct., 1913, being date of application in United States of America.]

"Obtaining products from petroleum by decomposition of component hydrocarbons thereof."

Applications received, 8th to 14th July—*continued.*

16,557. Teofron BOBERG and TECHNO-CHEMICAL LABORATORIES LIMITED.

[Dates applied for under International or Intercolonial Arrangements, 3rd May, 1919, and 27th May, 1919, being dates of applications in Great Britain, Nos. 11,092/*19* and 13,339/*19*.]

"Improvements in or relating to drying processes and apparatus therefor."

16,558. Edward Edward RICHARDSON.

[Date applied for under International or Intercolonial Arrangements, 6th June, 1916, being date of application in United States of America, No. 1,270,327.]

"Improvements in throttling valves."

16,559. GESELLSCHAFT FÜR DRAHTLOSE TELEGRAPHIE M.B.H.

[Date applied for under International or Intercolonial Arrangements, 8th Feb., 1916, being date of application in Germany, No. 30,013.]

"Operating direct current relays by electrical oscillations."

16,560. GESELLSCHAFT FÜR DRAHTLOSE TELEGRAPHIE M.B.H.

[Date applied for under International or Intercolonial Arrangements, 4th Feb., 1919, being date of application in Germany, No. 47,717.]

"Signalling to railway trains."

16,561. GESELLSCHAFT FÜR DRAHTLOSE TELEGRAPHIE M.B.H.

[Date applied for under International or Intercolonial Arrangements, 12th Sept., 1918, being date of application in Germany, No. 37,154.]

"Wireless telegraphy transmitting."

16,562. GESELLSCHAFT FÜR DRAHTLOSE TELEGRAPHIE M.B.H.

[Date applied for under International or Intercolonial Arrangements, 27th May, 1919, being date of application in Germany, No. 48,378.]

"Preventing disturbance in multiplex telephone wires."

16,563. GESELLSCHAFT FÜR DRAHTLOSE TELEGRAPHIE M.B.H.

[Date applied for under International or Intercolonial Arrangements, 28th May, 1919, being date of application in Germany, No. 48,388.]

"Conveyance of high frequency currents."

16,564. Graf Georg VON ARCO and Dr. Alexander MEISSNER.

[Date applied for under International or Intercolonial Arrangements, 5th Jan., 1914, being date of application in Great Britain, No. 252.]

"Relay arrangement for alternating currents."

16,565. Graf Georg VON ARCO and Dr. Alexander MEISSNER.

[Date applied for under International or Intercolonial Arrangements, 30th Dec., 1913, being date of application in Great Britain, No. 29,946.]

"Transmitting arrangements for high frequency telegraphy and telephony."

16,566. W. KOSSEL.

[Date applied for under International or Intercolonial Arrangements, 17th Jan., 1919, being date of application in Germany, No. 63,763.]

"Electric discharge tubes."

16,567. GESELLSCHAFT FÜR DRAHTLOSE TELEGRAPHIE M.B.H.

[Date applied for under International or Intercolonial Arrangements, 4th Mar., 1918, being date of application in Germany, No. 309,255.]

"Improvements in conducting coils."

16,568. W. KOSSEL.

[Date applied for under International or Intercolonial Arrangements, 23rd Dec., 1916, being date of application in Germany, No. 68,476.]

"Electric discharge tubes."

16,569. GESELLSCHAFT FÜR DRAHTLOSE TELEGRAPHIE M.B.H.

[Date applied for under International or Intercolonial Arrangements, 29th Jan., 1918, being date of application in Germany, No. 46,183.]

"Improvements in cathode tubes."

Applications received, 8th to 14th July—*continued.*

16,570. GESELLSCHAFT FÜR DRAHTLOSE TELEGRAPHIE M.B.H.

[Date applied for under International or Intercolonial Arrangements, 6th Dec., 1917, being date of application in Germany, No. 304,360.]

"Production of oscillations by vacuum tubes."

16,571. GESELLSCHAFT FÜR DRAHTLOSE TELEGRAPHIE M.B.H.

[Date applied for under International or Intercolonial Arrangements, 24th Oct., 1917, being date of application in Germany, No. 309,203.]

"Improvements in conducting coils."

16,572. GESELLSCHAFT FÜR DRAHTLOSE TELEGRAPHIE M.B.H.

[Date applied for under International or Intercolonial Arrangements, 25th Oct., 1918, being date of application in Germany, No. 47,314.]

"Cathode tube generators."

16,573. GESELLSCHAFT FÜR DRAHTLOSE TELEGRAPHIE M.B.H.

[Date applied for under International or Intercolonial Arrangements, 3rd June, 1918, being date of application in Germany, No 46,732.]

"Electric wave receivers."

16,574. GESELLSCHAFT FÜR DRAHTLOSE TELEGRAPHIE M.B.H.

[Date applied for under International or Intercolonial Arrangements, 31st Dec., 1915, being date of application in Germany, No. 298,484.]

"Production of high power constant frequency current."

16,575. GESELLSCHAFT FÜR DRAHTLOSE TELEGRAPHIE M.B.H.

[Date applied for under International or Intercolonial Arrangements, 15th July, 1915, being date of application in Germany No. 43,077.]

"Improvements in cathode tube generators."

16,576. GESELLSCHAFT FÜR DRAHTLOSE TELEGRAPHIE M.B.H.

[Date applied for under International or Intercolonial Arrangements, 9th Feb., 1916, being date of application in Germany, No. 43,709.]

"Maintaining speed of electric machines constant."

16,577. GESELLSCHAFT FÜR DRAHTLOSE TELEGRAPHIE M.B.H.

[Date applied for under International or Intercolonial Arrangements, 6th Mar., 1917, being date of application in Germany, No. 302,592.]

"Electrical condensers."

16,578. GESELLSCHAFT FÜR DRAHTLOSE TELEGRAPHIE M.B.H.

[Date applied for under International or Intercolonial Arrangements, 22nd July, 1918, being date of application in Germany, No. 46,934.]

"High frequency amplifiers."

16,579. GESELLSCHAFT FÜR DRAHTLOSE TELEGRAPHIE M.B.H.

[Date applied for under International or Intercolonial Arrangements, 20th Oct., 1917, being date of application in Germany, No. 45,793.]

"Wireless telegraph transmitters."

16,580. GESELLSCHAFT FÜR DRAHTLOSE TELEGRAPHIE M.B.H.

[Date applied for under International or Intercolonial Arrangements, 7th Jan., 1918, being date of application in Germany, No. 46,106.]

"Cathode ray tubes."

16,581. GESELLSCHAFT FÜR DRAHTLOSE TELEGRAPHIE M.B.H.

[Date applied for under International or Intercolonial Arrangements, 17th Jan., 1919, being date of application in Germany, No. 47,627.]

"Wave telephone systems."

16,582. Anton FLETTNER.

[Date applied for under International or Intercolonial Arrangements, 16th June, 1917, being date of application in Germany.]

"Method and device for the steering of ships."

Applications received, 8th to 14th July—*continued.*

16,583. Anton FLETTNER.

[Date applied for under International or Intercolonial Arrangements, 16th June, 1919, being date of application in Germany.]

"Devices for steering air-craft."

16,584. FRIED. KRUPP AKTIENGESELLSCHAFT GRUSONWERK, *assignee of* Dr. phil. Otto DORMANN and Curt WENDLAND, *act. invs.*

[Dates applied for under International or Intercolonial Arrangements, 8th Apr., 1914, and 23rd June, 1914, being dates of applications in Germany, Nos. K.58,490 and K.59,302.]

"Improvements in or relating to the manufacture of Portland cement."

16,585. Pierre Baruch BERNARD and Anatole Louis MOUTIER.

[Date applied for under International or Intercolonial Arrangements, 26th June, 1919, being date of application in France.]

"Improvements in or relating to windlasses."

16,586. FRIED. KRUPP AKTIENGESELLSCHAFT GRUSONWERK, *assignee of* Franz GRUESSNER, *act. inv.*

[Date applied for under International or Intercolonial Arrangements, 3rd June, 1919, being date of application in Germany.]

"Improvements in or relating to the recovery of metals by volatilization."

16,587. FRIED. KRUPP AKTIENGESELLSCHAFT GRUSONWERK, *assignee of* Georg ULLRICH, *act. inv.*

[Date applied for under International or Intercolonial Arrangements, 11th July, 1919, being date of application in Germany.]

"Improvements in or relating to magnetic ring-separators."

16,588. Georges Albert Ulysse CARUELLE.

[Date applied for under International or Intercolonial. Arrangements, 20th Apr., 1916, being date of application in France, No. 484,516.]

"Multicellular band for the raising of liquids."

16,589. ERICH F. HUTH, G.M.B.H.

[Application under International or Intercolonial Arrangements. Application in Germany, No. 295,813.]

16,590. ERICH F. HUTH, G.M.B.H.

[Application under International or Intercolonial Arrangements. Application in Germany, No. 302,890.]

16,591. *Prov.* Walter James WILKINSON—

"Improvements in and connected with moulds for concrete buildings and the like."

16,592. *Prov.* Henry FORD—

"Improvement in pulley for tractors."

16,593. William LARKIN.

[Date applied for under International or Intercolonial Arrangements, 4th May, 1918, being date of application in United States of America, Serial No. 232,542/*18*.]

"Improvements relating to reflecting signals."

16,594. Julius R. HALL.

[Date applied for under International or Intercolonial Arrangements, 4th Apr., 1918, being date of application in United States of America, No. 1,286,604.]

"Improvement in furnace doors."

16,595. Benjamin Edward MEACHAM—

[Date applied for under International or Intercolonial Arrangements, 16th Nov., 1914, being date of application in United States of America, No. 1,236,335.]

"Improvements in thermostatic fuel regulating devices for gas ovens."

16,596. Lloyd M. WILLIAMS, Percy J. WILLIAMS and Chester L. WILLIAMS.

[Date applied for under International or Intercolonial Arrangements, 4th Nov., 1916, being date of application in United States of America, Serial No. 129,601/*16*.]

"Improvement in accelerator attachments."

Applications received, 8th to 14th July—*continued.*

16,597. Eikichi Otsuka.

[Date applied for under International or Intercolonial Arrangements, 30th Dec., 1917, being date of application in Japan.]

"Improvements in an apparatus for concentrating ores by flotation."

16,598. David Rees Bowen and Carl Frederic Schnuck.

[Date applied for under International or Intercolonial Arrangements, 11th July, 1919, being date of application in United States of America, Serial No. 310,020/*19*.]

"Improvements in machines for treating rubber or other plastic material."

16,599. *Prov.* John Edward Russell—

"Improvements in and relating to the mounting of the axle to the wheeled frames of spraying apparatus or other vehicles."

16,600. *Prov.* John Henry Dondey—

"Improvements relating to the construction of motor chassis."

16,601. *Prov.* Henry Eli White—

"Improvements in and relating to the construction of the walls of buildings from moulded slabs or the like."

16,602. *Prov.* Arthur Joseph Brown—

"Improvements in or relating to certain descriptions of electric conveyors."

16,603. Wilhelm Doms.

[Date applied for under International or Intercolonial Arrangements, 11th Apr., 1918, being date of application in Germany. No. D.34,392.]

"Safety device against burglary."

16,604. Henry Vail Dunham.

[Date applied for under International or Intercolonial Arrangements, 9th Nov., 1918, being date of application in United States of America.]

"Edible-oil preparations."

16,605. Henry Vail Dunham.

[Date applied for under International or Intercolonial Arrangements, 4th Sept., 1918, being date of application in United States of America.]

"Medicinal-oil preparation."

16,606. Richard Leddicoat Wearne.

[Date applied for under International or Intercolonial Arrangements, 18th Mar., 1915, being date of application in United States of America, No. 1,147,285.]

"Improvements in washing machines."

16,607. La Societe Anonyme L'Oxhydrique Francaise.

[Date applied for under International or Intercolonial Arrangements, 29th May, 1919, being date of application in France, No. 1624.]

"Improvements in or relating to catalythic processes for use more particularly in the hydrogenation of oils, fatty bodies and the like."

16,608. *Prov.* Victor Lewis Gay and James Wilfred Gay—

"Improvements in attachments for fluid containers for discharging purposes."

16,609. *Prov.* Victor Lewis Gay and James Wilfred Gay—

"Improvements in attachments for fluid containers for discharging purposes."

16,610. Wilhelm Holtorp.

[Date applied for under International or Intercolonial Arrangements, 20th Aug., 1915, being date of application in Germany. No. 295,868.]

"A lubricant for pulleys and cranks."

Monday, 12th July.

16,611. Dr. Erich Huth G.m.b.h. and Siegmund Loewe.

[Date applied for under International or Intercolonial Arrangements, 16th July, 1917, being date of application in Germany, No. 302,465.]

16,612. Dr. Erich Huth, G.m.b.h.

[Date applied for under International or Intercolonial Arrangements, 27th Sept., 1917, being date of application in Germany. No. 310,152.]

Applications received, 8th to 14th July—*continued.*

16,613. Dr. Erich Huth, G.m.b.h.

[Date applied for under International or Intercolonial Arrangements, 8th Sept., 1916, being date of application in Germany. No. 298,072.]

16,614. *Prov.* Frank Newman Patmore—
"Improvements in the manufacture of metal toy buckets."

16,615. *Prov.* Philip Ernest Rechter and William Leslie Rechter—
"Tap for automatically filling all kinds of receptacles."

16,616. *Prov.* Frederic Cyril Custance—
"An automatic tractor earth scoop."

16,617. *Prov.* Denis Minty—
"Force pump."

16,618. *Prov.* John Reuben Beddison and Robert James Beddison—
"Motor or belt drive for grinder."

16,619. *Comp.* Sidney Williams—
"Improvements in hubs for wind wheels and the like."

16,620. *Prov.* Henry Frank Douglas Hurburgh—
"Adjustable collar stud."

16,621. *Prov.* Frank Charles Malin—
"Improved thermal reservoir cooking utensil."

16,622. *Prov.* Julius Tindal Pym and William Illidge—
"Improvements in electrically heated water heaters."

16,623. *Prov.* Henry Alfred Armstrong—
"Door-holder."

16,624. *Prov.* Henry Alfred Armstrong—
"Self-catch lock (for cupboards)."

16,625. *Prov.* Henry Alfred Armstrong—
"Door-holder."

16,626. *Prov.* Fitzhardinge Murton—
"Improved device for indicating unauthorised manipulation of a door, window or the like principally for burglar alarm purposes."

16,627. *Prov.* Albert Arthur Higgs—
"Improved spring equaliser."

Tuesday, 13th July.

16,628. *Prov.* Arthur Bridge—
"A device for trapping foxes, dingoes, and other like animals."

16,629. *Comp.* Walter John Sachs—
"Improvements in permanent mould machines."

16,630. *Prov.* Hannah Mary Elvery—
"Improved lettercard."

16,631. *Prov.* John George Morris—
"Improvements relating to the hood construction of motor driven passenger vehicles."

16,632. *Prov.* Frederick Herman and Victor Werner Walter Wangenheim—
"Improvements in flotation garments for persons in water."

16,633. *Prov.* Bertram Wilfred Thomas—
"Improvements in animals traps."

16,634. *Prov.* Peter Campbell—
"An improved composition of matter for making moulds and the like used in metal casting."

16,635. *Prov.* James Livesey Scott—
"An improved tabulator or reminder."

16,636. *Prov.* Albert Waters—
"Improvements relating to the manufacture of the ends or retaining members of sleeve links and other like articles."

16,637. *Prov.* Ernest Thomas Price and William George Gibb—
"Hoof parer."

Applications received, 8th to 14th July—*continued.*

Wednesday, 14th July.

16,638. *Comp.* Lambert TRUSCOTT—

"An appliance for drawing off liquid from metal and other containers."

16,639. *Prov.* Harold BIGGS—

"An improved bucket runner."

16,640. *Prov.* Arthur William JONES—

"Magnetic landing and starting platform for aircraft."

16,641. *Prov.* Morris Vincent PRICE—

"Ladies peggy bag handle."

16,642. *Prov.* Alexander HARDIE—

"A travelling sectional railway. A new and improved method and means to enable the use of the same railway vehicles on tracks of any gauge."

16,643. *Comp.* Adah Lavinia TAYLOR, *legal representative of* Thomas Anchard Atchison TAYLOR, *act. inv.* (deceased)—

"An improved construction of hurdle."

16,644. *Prov.* Robert Horne CRAIG—

"An improved adjustable soapholders."

16,645. *Prov.* William James BOWKER and Mary Elizabeth BOWKER—

"A needle threading device."

16,646. *Comp.* William Herbert Simpson BREWER—

"Improved kettle and the like lid raising means."

16,647. *Prov.* CRAY FISHERIES AND PRESERVING COMPANY PROPRIETARY LIMITED (INCORPORATED), *assignee of* Michael MCGINNESS, *act. inv.*—

"Improved process of and means for perserving and packing crayfish."

16,648. *Prov.* Thomas William REDFERN—

"An improved spring wheel."

16,649. *Prov.* Edward SALTAT—

"Universal cigar holder pipe with nicotine cleanliness and smoke coolness."

16,650. *Prov.* John William Bernard HESSION—

"Improved coupling for attaching side car chassis to motor cycles having spring frames."

16,651. *Prov.* William Kennedy HANSEN—

"Perforated propeller."

16,652. *Comp.* John Abbot LEWIS—

"Improved clothes drying apparatus."

16,653. John Abbot LEWIS—

"Improved non-skid attachment for rubber tyred vehicles."

16,654. *Prov.* Robert Morse WITHYCOMBE—

"Improvements in containers for dispensing liquids and plastic substances."

16,655. *Comp.* August LYELL—

"Improved gravity motor."

Corrigenda.

1919.

In Vol. 30, No. 48, p. 1379, under heading "Applications Received," *for* 13,598. John Pearce ROE, &c., *read*—

13,598. John Pearce ROE.

[Date applied for under International or Intercolonial Arrangements, 26th Feb., 1917, being date of application in Great Britain, No. 128,650.]

"Improvements in or relating to rope supporting sheaves for use in connection with aerial ropeways."

1920.

In Vol. 32, No. 25, p. 882, under heading "Applications Received," *for* 16,252. *Comp.* James MILLER, &c., *read*—

16,252. James MILLER.

[Date applied for under International or Intercolonial Arrangements, 13th Feb., 1919, being date of application in Great Britain, No. 1320/*19*.

"Improvements in and relating to filter presses and the like."

Provisional Specifications Accepted.

Names in parentheses indicate actual inventors, &c., who are not applicants
Italics indicate that some amendment has been made.

1919.

10,703. Gosper, A., & Fletcher, H. P. Grinding machine.
11,743. Chilcott, *Thomas Robert Relleen, Improvements relating to closet pans.*
13,808. Fossey, C. H. L. *Improvements in sugar cane planters usable also as spreaders for lime sand, gravel, road metal and the like.*

1920.

14,476. Hyland, C. A. & K. A. *Improvements in and relating to mop frames.*
14,789. Kirby, T. E. H. *Waterproof dressing.*
14,836. Buckingham, W. Finger ring.
14,841. Leslie, R. D., & Snowden, F. E. H. Oil stove.
15,323. Campbell, J. Refining sugar.
15,481. Hastwell, A. J. *Infant's convertible chair.*
15,717. Corbett, A. B. Cost calculator.
15,723. Alcock, F. A. L. Window.
15,746. Newmark, A. Sawdust articles.
15,754. Christian, W. H. Wool saver.
15,760. Ostberg, A. J. Reclaiming fabric.
15,766. Howarth, J. F. Destroying rabbits.
15,779. Nevill, P. W. Copper recovery.
15,792. Winchester, H. M. Clothes-peg.
15,794. Bate, F. T. & Bates, J. Bolt and nut.
15,795. Bottrell, Dr. H. T. Depilating skins.
15,817. Kennett, C. E. Ladder lock.
15,824. Norton, P. H. Clothes-peg.
15,832. Franklin, C. G. Polishing wind shield.
15,868. Tucker, H. W. L. Severing stamps.
15,885. Walker, H. A. Anti-fouling composition.
15,891. Spencer, H. A. Heating water.
15,908. Lizzani, G. Parquetry flooring.
15,916. Peters, C. A. Wall ventilator.
15,921. Condy, Alice. Grilling utensil.
15,922. Lungley, C. F. Cleansing wool.
15,923. Nutman, G. B., & Smith, F. P. Loose-leaf binding.
15,924. Dean, Florence M. Jug and cup.
15,925. Glynn, D. F. Mirror device.
15,927. Tankard, M. Protecting motor ignition wires.
15,939. Jenkin, S. Vulcanizer.
15,940. Anderson, T. Concrete building.
15,941. Bishop, J. E. Trailer.
15,942. Ebsworth, R. H. Carburettor.
15,945. Peck, H. L. Combustion engine control.
15,946. Churchill-Shann, M. H. Stoking boilers.
15,947. Bassett, J. Puzzle.
15,950. Maroske, O. Cattle trough.
15,959. Tompson, C. L. Motor gear shifting.
15,961. Boughton, C. V., Davis, G. E., & Reason, C. Motor vehicle.
15,986. Bridge, A. Closet seat.
16,015. Le Plastrier, C. W. (Eckerson, A. W.). Tyre inflation valve.
16,016. Adams, J. H. Collapsible metal tube.
16,021. Lawrence, G. Siphon pump.
16,022. Johnstone, F. W. Coating rubber tyres.
16,023. Allen, J. B. Brackets for curtain rods.
16,024. Simmonds, B. Laying on paint.
16,074. Robertson, G. Combination weapon.
16,080. Maunder, H. J. Self-propelled traction vehicle.
16,083. Downes, W. J. Windmill control.
16,110. McLoughlin, W. C. Knitting machine.
16,116. Pritchard, F. Floor polishing device.
16,136. Long, R. B. Opening oysters.
16,186. Burns, J. A. & Ryan, F. P. Delivery of liquids.
16,187. Lungley, C. F. Treating hides.

* * *

Application for Patent dated other than Date of Lodgment.

1920.

14,789. Kirby, T. E. H.

[Application post-dated to 22nd May, 1920.]

Complete Specifications lodged after Provisional Specifications.

Complete Specifications under Section 63A have their Cognate Provisionals indicated in brackets. The date following the title is that on which the Complete Specification was lodged.

1919.

12,305. Robert John FROST—

"Improved electric water heater." 28th June, 1920.

12,366. John Herbert JOHNS—

"Improvements in and relating to bed rail fittings." 1st July, 1920.

12,496. Patrick Dominick COSGROVE—

"Improvements relating to crop lifting devices or reels for harvesting machines." 7th July, 1920.

12,498. Percy John PRINGLE and David MAXWELL—

"Improvement in apparatus for surface or local hardening of steel by the electric arc." 12th July, 1920.

12,526. Norman Bruce HAIR, *assignee of* John KRAUSE, *act inv.*—

"Domestic appliance for mixing, beating, and aerating egg pulp and liquids." 2nd July, 1920.

12,568. [14,236/*20.*] William James NOTT—

"Improvements in pumps." 5th July, 1920.

12,634. Benjamin Franklin RUSHTON—

"Improved process for the softening or purification of water." 5th July, 1920.

12,975. Christopher Norman SHAKESPEARE—

"Improvements in tombstones." 8th July, 1920.

13,182. Charles Gordon WOODS—

"Combination water heater and circulating cylinder for domestic hot water services and the like." 9th July, 1920.

13,245. [16,025/*20.*] John Herbert JOHNS—

"Improvements in and relating to stays for casements and the like." 7th July, 1920.

13,327. Monamy Burnet LANGDON and Victor Albert Henry WEBER—

"An electro-magnetic action for pipe organs." 9th July, 1920.

13,524. Albert Ernest ROBINSON and William Thomas GIDLEY—

"Improvements in water flush control valves." 8th July, 1920.

1920.

14,245. [15,929.] William DUNSTAN—

"Non-skid unpuncturable cover for pneumatic tyres and the like." 7th July, 1920.

14,399. Victor Alan MACARTNEY—

"An improved cooling safe." 22nd June, 1920.

14,821. Joseph PIERCY—

"An improved water-chilled dairy can." 9th July, 1920.

15,297. Sydney Hood THORP—

"Improvements in blouse belts and the like." 7th July, 1920.

15,707. Albert Edward COTTOM—

"An improved method of and means for manufacturing castings for shaping and drying stockings, socks and the like." 30th June, 1920.

Applications with Provisional Specifications Lapsed, Abandoned, or Withdrawn.

Names in parentheses indicate actual inventors, &c., who are not applicants.

1919.

Lapsed.

11,824. Mitchell, R. S. M. (Barnes, F. G.)
12,419. Ible, E. E.
12,425. Jenkin, S.
12,426. Gardiner, F. T., G. V., & C. T.
12,431. Bennett, G. C.
12,433. Bolton-Wood, N. E.
12,434. Walker, H. R.
12,435. Pedder, W. Y.
12,440. King, A. E. and Crawley, J.
12,442. Gilruth, D. S.
12,443. Davis, J.
12,444. Bawden, J. M.
12,452. Saunders, C. A., and Harvey, F. H.
13,453. Tingey, Rosina E.
12,454. Williamson, M. K.
12,455. Archibald, D. B.
12,456. Arnold, A.
12,457. Arnold, A.
12,460. Pascoe, C.
12,462. Shea, J. C.
12,464. Amalgamated Wireless (Australasia), Ltd. (Horner, E. A.)
12,467. Bull, R. S.
12,470. Dawson, H. S., & Billington, W.
12,471. Lawrence, G., & Usher, W.
12,472. James, R. S.
12,474. Cottrell, W. F.
12,476. Young, A. J. A., & Russen, A. C.
12.479. Wells, A. H.
12,483. Shearer, D.
12,484. Shearer, D.
12,488. Birrell, T. F.
12,489. Green, W.
12,492. Cross, F.
12,493. Brooks, A.
12,494. Huxtable, J.
12,502. Crosbie, R. G.
12,507. Clarke, P. H., & Anschau, J. F.

Applications with Complete Specifications (not open to Public Inspection) Lapsed, Refused, Abandoned, or Withdrawn.

Complete Specifications under Section 63A have their Cognate Provisionals indicated in brackets. Names in parentheses indicate actual inventors, &c., who are not applicants.

1919.

Lapsed.

10,377. Amalgamated Wireless (Australasia) Ltd. (Fisk, E. T.)
10,713. Hoggard, C. W.

Abandoned.

12,081. Cooke, J. E. M.
13,525. Société Anonyme pour l'Exploitation des Procédés Westinghouse - Leblanc (Leblanc, C. A. M.)

Withdrawn.

11,591. Easton, E.

Specifications open to Public Inspection before Acceptance,

UNDER SECS. 121 AND 122, "PATENTS ACT 1903-1909."

The specifications may be inspected at the Patent Office, Melbourne, on payment of the search fee of One Shilling in respect of each Application.

Typed copies of specifications will be supplied at Sixpence per 100 words (minimum charge, One Shilling).

Sun prints of drawings will be supplied at One Shilling per foolscap folio sheet (8 inches x 13 inches).

Fees must be tendered in cash or postal note or in money order, payable to the Commissioner of Patents, Melbourne.

1920.

14,238. AKTIEBOLAGET LJUNGSTRÖMS ÅNGTURBIN, *assignee of* Fredrik LJUNGSTRÖM, *act. inv.*

[Date applied for under International or Intercolonial Arrangements, 3rd Feb., 1919, being date of application in Sweden, No. 474/*19*; open to public inspection 4th Feb., 1920.]

"Toothed wheels with resilient teeth."

14,879. Abram Lipman OSTROV.

[Date applied for under International or Intercolonial Arrangements, 30th June, 1919, being date of application in Great Britain, No. 21,795/*18*; open to public inspection 1st July, 1920.]

"Improvements relating to medical or dental syringes."

15,095. Harry Raymond COLLINS.

[Date applied for under International or Intercolonial Arrangements, 1st July, 1919, being date of application in United States of America, Serial No. 307,880/*19*; open to public inspection 2nd July, 1920.]

"Pulverized fuel furnace."

15,638. The Honourable Sir Charles Algernon PARSONS, K.C.B., Stanley Smith COOK, Alfred Quintin CARNEGIE, and John FORD.

[Date applied for under International or Intercolonial Arrangements, 4th July, 1919, being date of application in Great Britain, No. 16,800/*19*; open to public inspection 5th July, 1920.]

"Improvements in furnaces and in discharging apparatus therefor."

15,778. The Honourable Sir Charles Algernon PARSONS, K.C.B., Stanley Smith COOK, Alfred Quintin CARNEGIE, John FORD, and Matthew BONE.

[Date applied for under International or Intercolonial Arrangements, 7th July, 1919, being date of application in Great Britain, No. 16,971/*19*; open to public inspection 8th July, 1920.]

"Improvements in dies."

15,968. Peter Pendleton ECKERSLEY.

[Date applied for under International or Intercolonial Arrangements, 10th Apr., 1919, being date of application in Great Britain, No. 9055/*19*; open to public inspection 5th July, 1920.]

"Improvements in electromagnetic wave transmission systems."

15,969. Stanley Robert MULLARD.

[Date applied for under International or Intercolonial Arrangements, 8th May, 1919, being date of application in Great Britain, No. 11,578/*19*; open to public inspection 3rd July, 1920.]

"Improvements in or relating to the construction of thermionic valves."

16,365. Thomas SHIELS.

[Date applied for under Intercolonial Arrangements, 1st July, 1919, being date of application in New Zealand, No. 41,944; open to public inspection 2nd July, 1920.]

"Improvements in milking machine releasers."

* * *

Complete Specifications Accepted.

OPEN TO PUBLIC INSPECTION AT THE PATENT OFFICE, MELBOURNE.

SEARCH OR INSPECTION FEE—ONE SHILLING EACH.

Notice is hereby given that all persons interested in opposing the grant of a Patent on any one of the following applications, may at any time within three months from the date of this Journal, or within such further time not exceeding one month as may on application made within such three months be allowed, give notice at the Patent Office, in Form G, which must be accompanied by the fee of £2, tendered in cash or postal note or in money order.

Within fourteen days after the lodging of the notice of opposition, or within such further time as the Commissioner allows, the opponent shall leave at the Patent Office declarations and copies thereof in support of his opposition, and forthwith after the receipt thereof the copies shall be transmitted by the Commissioner to the applicant.

Failure by an opponent to lodge declarations shall be deemed intentional abandonment of the opposition.

1917.

4302. Hadfield & Jack. Casting ingots.

1918.

7294. Armes Automatiques Lewis & Hulse. Fire-arm extractor.
7603. Gosper & Fletcher. Grinding machine.
8411. J. Samuel White & Co. Ltd., Forster, & Brown. Controlling Diesel type engines.

1919.

11,083. Staite. Self-contained refrigerating plant.
11,153. Hipwell. Temperature-change alarm.
11,284. Hindle, *act. inv.*, Savage, Liddle, & Dabbs, *assignees. Improvements in roller, ball, or other bearings.*
11,373. James. Moulds for concrete structures.
11,513. McDonald. Vehicle wheel.
11,612. Still. *Improvements in and connected with the cylinders of internal combustion engines.*
11,733. Fisher. Mounting for rock drill.
11,734. Fisher. Rock drill feeding device.
11,736. Condy. Bedstead.
11,751. Rigg. Blast roasting ore.
11,761. The British United Shoe Machinery Co. of Aust. Pty. Ltd. (Connor, Foster, Martin, Toothaker, & Bates). Turnshoe manufacture.
11,762. The British United Shoe Machinery Co. of Aust. Pty. Ltd. (Jorgensen). Upper pulling machine.
11,773. Ross. Steam superheater
11,809. May. Cultivator frame.
11,873. Downs. Motor car locking device.
12,044. Budd Wheel Corporation, *assignee of Charles Schenck, act. inv. Improvements in and relating to metal wheels.*
12,185. Phillips (Goudie). Jib crane.
12,303. Franc. Washing and drying machine.
12,338. Shearer. Lifting and steering ploughs.
12,363. The Australian Wood Pipe Co. Ltd. (Burnett). Flexible pipe-joint.
12,418. Mitchell. Vibrating screens.
12,445. O'Mara. *Improvements in and relating to apparatus for pumping by means of compressed air.*
12,458. The National Cash Register Co. (Goldberg). Registering and recording mechanism.
12,534. Thiselton. Excavator.
12,682. Ateliers Léonard Rocour, Société Anonyme (Eloy). Pneumatic hammer valve.
12,693. Sellars. Detachable boot heel.
12,781. Brell. Snap fastener.
13,000. Turner. *Improvements in hose and other band clamps.*
13,001. Pickering. Sectional chimney.
13,048. Vaughan. Wheeled scoop.
13,266. Williams. Wood piping and troughing.
13,522. The Ridd Co. Ltd. (Ridd). Teat cup.
13,605. United States Hoffman Machinery Co. (Spencer). Pressing machine.
13,634. John Heine & Son Ltd. (Stuart). Can heading machine.
13,742. Lesley. Cement production,

Complete Specifications Accepted—*continued.*

1919.

13,822. Acfield & Johnson. Railway point clamp.
13,823. Seymour. Shock absorber.
13,852. D.O.T. Societe Anonyme pour l'Exploitation des brevets Descalles, *assignee of Eugene Maurice Octave Descalles, act. inv.* Combination padlock.

1920.

13,955. Superior Mfg. Co. (Woock & Woock). Twin centrifugal pump.
13,956. Superior Mfg. Co. (Woock & Woock). Deep well pump.
13,957. Le Plastrier (Automatic Machinery Co.—Hallock, Frederick, & Purcell). Belt conveyor.
13,965. Ackley. Operating rolling stock brakes.
14,021. Walker. Fume destroying composition.
14,062. Mitchell. Oil extraction.
14,104. Beldam. Metallic packing.
14,313. Daniel. Rotary valve.
14,614. Cooper. Spoons and forks.
14,697. Pyke. Window cleaner.
14,780. Kemp. Hollow building block.
14,781. Bennett & Kirsten. Loose-leaf book.

NOTE.—THE SURNAMES IN PARENTHESES INDICATE ACTUAL INVENTORS (OR OTHER INTERESTED PARTIES) WHO ARE NOT APPLICANTS. ITALICS INDICATE THAT SOME AMENDMENT HAS BEEN MADE.

Further information of the inventions in the above Specifications is given in the following Illustrated Notes, and the full particulars of names, addresses, and occupation or calling of persons concerned in each application are stated in the Printed Specifications.

Printed copies of the above Specifications may now be ordered from the Government Printer, Melbourne, price One Shilling each, post free for cash or postal note; the copies will be posted from Melbourne two weeks after the date of this Journal, when copies will also be forwarded to the Trade Marks Sub-offices, at the Commonwealth Bank Buildings, Sydney, and at the Customs Houses, Brisbane, Adelaide, Perth, and Hobart, for sale on demand.

A list of Australian and Foreign Offices and Libraries at which the Printed Specifications are placed for free public inspection is given in the first Journal of each quarter.

* * *

Illustrated Notes

TO THE FOREGOING ACCEPTED COMPLETE SPECIFICATIONS.

The class numbers refer to similar inventions comprised in the Classified Subject Matter Indexes.

1917.

4302. 16 June. Sir R. A. HADFIELD, Knight, F.R.S., and A. G. McK. JACK, England.

Class 70.4.

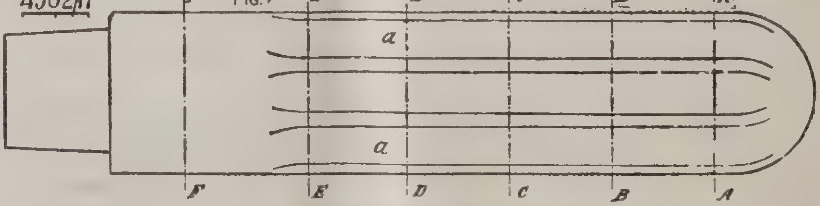
Casting Ingots.

To ensure cooling from the bottom upwards and to preserve a section of substantially uniform outside dimensions so as to give correct centring in an extruding die, a mould is used of such shape as will cast the ingot with longitudinal flutes **a**, of depth increasing from top to bottom so that its sectional area diminishes and its radiating surface increases downwards.

The section of the ingot may in general shape be round, square, or polygonal.

4302/17

FIG. 1



12 figures, 3 claims.

Illustrated Notes—*continued.*

1918.

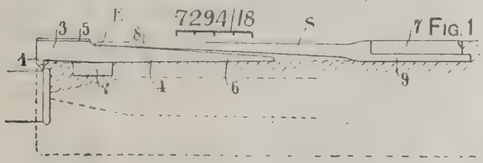
7294. 9 May. Armes Automatiques Lewis, *assignee*, and F. W. Hulse, *act. inv.*, England.

Date applied for under International or Intercolonial Arrangements, 17th July, 1917, Great Britain, No. 10,326/*17*.

Class 89.3.

Fire-arm Extractor.

To easily fit the extractor to the breech-block and increase its life under severe and quickly repeated stresses, it is formed in two separate pieces, comprising the extractor proper **3** having a lug **2** which fits in a slot in the breech-block, and a spring blade **8**, a flange **9** of which fits in an undercut slot in the breech-block.



3 figures, 2 claims.

7603. 8 June. A. Gosper, *act. inv.*, and H. P. Fletcher, *assignee*, N.S.W.

Sec. 63a. Including cognate No. 10,703/*19*.

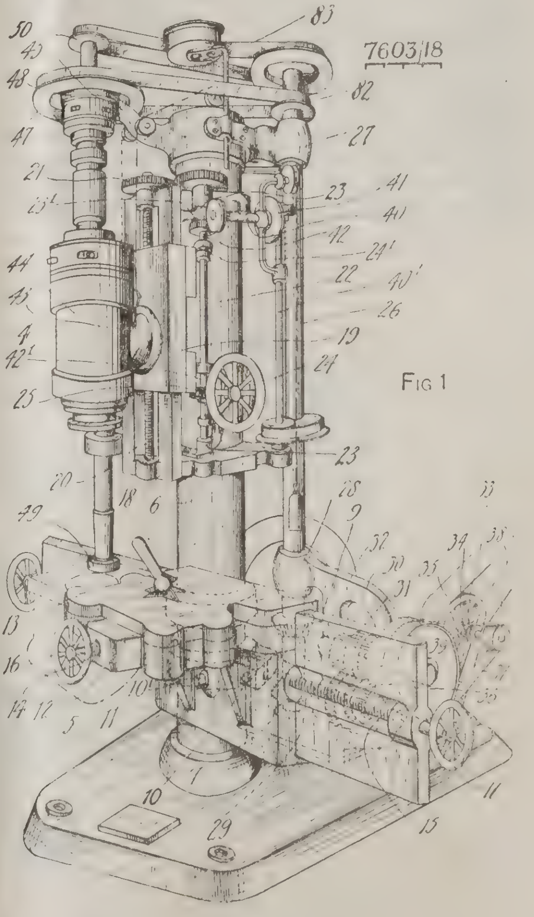
Class 75.3.

Grinding Machine.

An engine cylinder grinding machine in which the radius of action of the grinding wheel is adjusted to suit different diameters of cylinders by eccentrically mounted spindle sleeves, and in which the work-table and spindle-supporting carriage are capable of adjustment.

The work-table **13** is adjustable on the guides **9** and **12**, the former of which is adjustably clamped to the column **6**. A carriage **19** on vertical guides **18** supports a bearing **44** within which rotates a sleeve bored eccentrically to receive a second sleeve. This second sleeve is also positioned eccentrically in the hub **48** of the driving pulley **47**. A third sleeve is bored centrally to receive a hollow spindle within which rotates the grinding spindle proper. The second and third sleeves, and the hollow spindle and grinding spindle are respectively keyed to prevent independent rotation. The eccentricity of the first and second sleeves may be adjusted to give the desired circular orbit for the grinding wheel **49**.

The sleeve pulleys **47** and spindle pulley **50** are driven from the shaft **26** by the speed gear **31**. The vertical carriage **19** is fed by the hand-wheel **24** or by worm gear **23^1** from the feed shaft **40**. A clutch **24^1** is provided to disconnect the hand feed from the power feed.



3 figures, 7 claims.

Illustrated Notes—*continued.*

8411. 22 Aug. J. SAMUEL WHITE & COMPANY LIMITED, A. FORSTER, and J. H. BROWN, England.

Date applied for under International or Intercolonial Arrangements, 9th Mar., 1918, Great Britain, No. 4187/*18*.

Classes 66.7; 61.7.

Controlling Diesel Type Engines.

To provide a means for starting up Diesel type engines without admitting compressed air to all of the cylinders, and irrespective of the position of the cranks, and to minimize the wastage of air and the risk of freezing, a simple hand control successively operates the ahead and astern starting valves, and a pressure relief valve, in a system of pneumatically operated timing, fuel and pilot valves.

In a six cylinder engine the cylinders **A** are connected in sets of three with the control system. Compressed air from a flask **k** is led through a main pneumatically operated air relay valve **K** and pipe **C** to the starting valves of all the cylinders. A similar flask **j**, connected to a pneumatically operated fuel injection air relay valve **J**, controls the fuel injection to the cylinders by the valves **E**.

Control is effected by a handle **G**^{1} operating the two starting valves **N** and **O** controlling the air supply to pipes **H**, **H**^{1} for ahead and astern starting, respectively, timing valves **B**, **B**^{1}, pneumatically operated, automatically cutting off the air supply to the pilot valves **D**, **D**^{1} in either of the groups of cylinders after a predetermined period. The handle **G**^{1} also operates a valve **P** connected by pipes **f** to the cylinder relief valves **F**.

A modification provides for dispensing with the pilot valves **D**, **D**^{1}, in which case the starting valve cams are operated by a pneumatic piston valve.

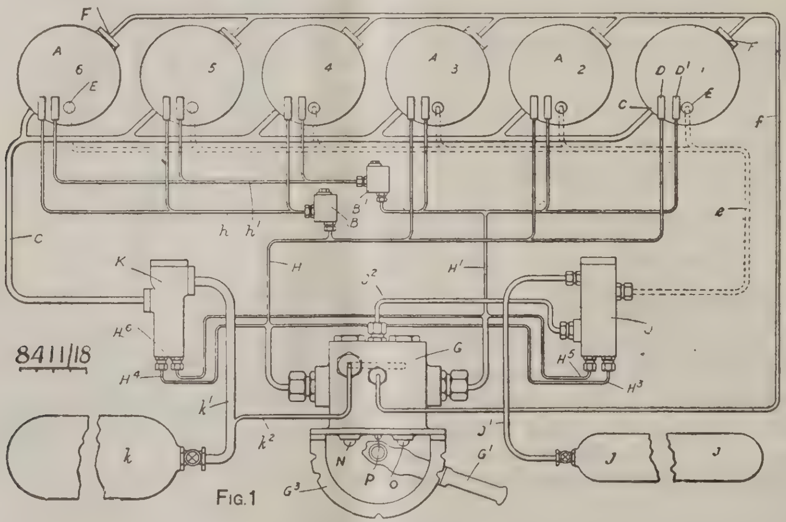


Fig. 1

13 figures, 11 claims.

Illustrated Notes—*continued.*

1919.

11,083. 12 May. A. W. Staite, New South Wales.

Sec. 63a. Including cognates Nos. 14,099/*20* and 14,340/*20*.

Class 29.4.

Self-contained Refrigerating Plant.

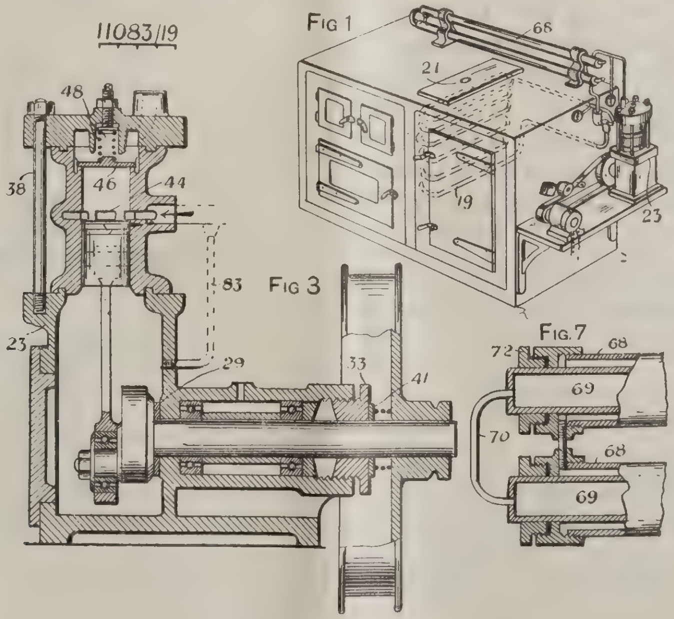
A self-contained refrigerating plant of the ammonia compression type consists of a motor driven trunk compressor **23**, a two pipe condenser **68**, an expansion valve **80** and other details, carried on a chamber **8** which is divided by a brine tank containing an ice mould.

The compressor **23** has a cylinder and head, secured by through studs **38**, and a crank-case gland **33** with auxiliary spring-pressed washers **29**, **41**. The discharge valve **46** is adjustably loaded by a spring **48**, and suction entrance is through the cylinder wall at **44**, a by-pass **83** to the crank-chamber being provided. In modifications, the discharge valve has guiding wings, the crankshaft bearing has a mercury seal, and connexion between the cylinder and crank chamber at the end of out-stroke is provided by a grooved cylinder bore.

The condenser is made up of one or more pairs of inner and outer pipes **68**, **69**, forming between them a passage for the refrigerant, the joint being closed by screw glands **72**; the inner pipes are connected for passage of condensing water at **70**. In a modification, the inner and outer pipes are of equal length and the joint is made by a ring washer and a plug, which may be welded.

The charging connexion consists of a valve, located in the suction pipe, having a screw cap covering the spindle gland. In a modification, a gauze strainer and cut-off ball valve in a chamber with adjustable plug are provided.

The compressor with its motor **54** and the condenser are carried by the chamber, the condenser being supported on a rear bracket if desired. The chamber is divided centrally by a brine tank containing the evaporating coil **19** and receiving an ice mould through the door **21**. The floor of the chamber is provided with a tray and water-sealed drain.



10 figures, 19 claims.

Illustrated Notes—*continued.*

11,153. 19 May. H. LeH. Hipwell, Victoria.

Sec. 63a. Including cognate No. 12,898/*19*.

Classes 00.7; 88.2.

Temperature-change Alarm.

An apparatus for notifying sudden changes in temperature, in which the expansion or contraction of air in a vessel causes a movement of mercury between electric contacts in a U-tube which is rotatably mounted for adjustment and is situated in another room.

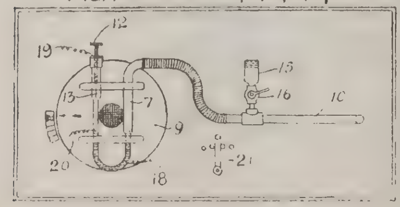
To obviate operation of the alarm by a gradual rise in temperature, a breather **15**, containing a filtering medium and mounted on a branch of the tube **10**, allows the air to escape when the pressure rises slowly.

To provide for alarms with sudden slight rises in temperature, the part of the tube containing mercury is made smaller than the part receiving the air pressures. The instrument may be set by canting and may be finely adjusted by a screw **12** carrying a contact wire **13**.

The contact wires **18** and **19** are connected in a bell circuit and operate on a rise in temperature taking place. The wires **18** and **20** are connected to a relay which operates to ring the bell when a fall in temperature takes place. A switch handle **21** controls switches in the relay and bell circuits.

To detect gradual rises or falls in temperature, the breather **15** may be cut out by closing a cock **16**.

Fig. 1 11153/19



5 figures, 8 claims.

11,284. 29 May. A. H. Hindle, *act. inv.*, S. W. Savage, A. Liddle, and A. E. Dabbs, *assignees*, England.

Class 60.8.

Roller or Ball Bearings.

To provide an automatic adjustment which compensates for variations in the alinement of a shaft, the bearing balls or rollers **2** are surrounded by a resilient raceway consisting of a helically wound tube **14** the coils of which have inwardly sloping contacting surfaces and which is freely supported in the housing with an external clearance space 16a.

The helix may be formed of coils having parallel sides, or the coils may be formed with concave or convex interlocking sides.

In modifications, the ends of the helix are supported on shoulders formed on the sides of the housing, or the centre of the helix may be supported by a collar on the shaft while the ends bear on two sets of rollers, and in a further modification, the rollers are located outside the helix.

11284/19

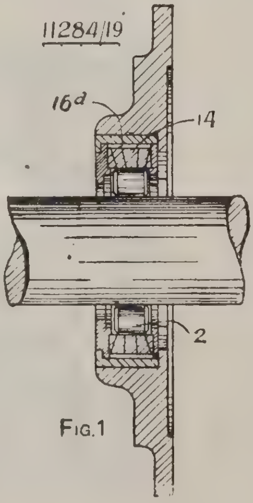


Fig. 1

5 figures, 3 claims.

Illustrated Notes—*continued.*

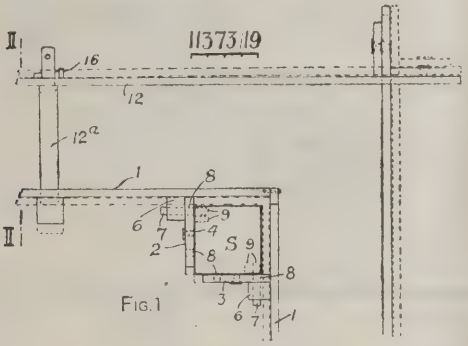
11,373. 4 June. W. J. James, Victoria.

Class 81.2.

Moulds for Concrete Structures.

An adjustable support for mould plates in which suitably stayed standards **S**, positioned at the corners of the structure, are fitted with vertical detachable and reversible plates **2**, **3** attached by means of screws **4** engaging keyhole slots located at different sides of the central line of the plates. The inner wall moulds **1** have cleats **6** which bear against the plates, and are attached thereto and to the standards by means of bolts **7** passed through holes **8** formed in the plates and holes **9** in the standards.

The outer walls **12** are detachably secured to the inner wall **1** by means of the pin **12**ª and detachable key pins **16**.



5 figures, 8 claims.

11,612. 30 June. W. J. Still, Eng.

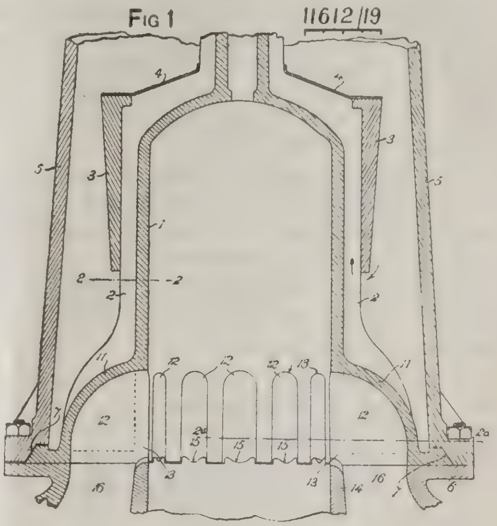
Class 66.8.

Cylinder Jackets.

To avoid distortion due to unequal temperature in internal combustion engine jackets of the type wherein a thin cylinder wall is supported by ribs and an exterior sleeve, the sleeve consists of a simply-shaped forging, separate from the outer jacket wall and immersed in the cooling water.

The relatively thin cylinder wall **1** has ribs **2**, which may be of section increasing outwardly, supported by the sleeve **3** separate from the outer jacket wall **5** and having a deflecting hood **4** whereby circulation of the jacket water around the sleeve is obtained.

In modifications, the sleeve is of dished form, and may be supported by bolts so as to resist longitudinal, as well as transverse stress, or may consist of a number of rings.



6 figures, 8 claims.

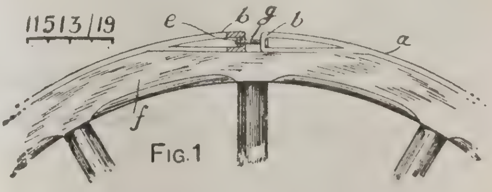
11,513. 18 June. C. S. McDonald, Vic.

Class 93.4.

Vehicle Wheel.

To provide means whereby the tyre of a vehicle wheel may be adjusted to secure an even tension on the felloe, the tyre **a** is formed with loops **b** which fit into a recess formed in the felloe **f**, and are drawn together by a bolt **d** engaging with a nut **e**, adjusted by means of a spanner applied to a squared portion **g**.

In modifications, the shape of the loops and the method of adjustment are varied.



6 figures, 7 claims.

Illustrated Notes—*continued.*

11,733. 8 July. S. Fisher, Transvaal, Union of South Africa.

Class 85.8.

Mounting for Rock Drill.

To enable a rock drill to be secured to the hanging and foot walls of a working place, the frame is provided with spikes 2, 3 at each end, which are free to slide in the frame and are adapted to be forced outwards by a hammer blow.

The upper spike 3 is screwed through a nut 7 mounted upon the frame and is fitted with a handle 8 by which the device is secured within the depression.

The frame carries a cradle 12 in which slides a slipper 13 with a lug 14 to which the drill 15 is clamped.

In a modification, the stems of the spikes are enclosed within the bar 1 and are provided with flanges to permit hammering. To retain the spikes, they are mounted in bushes and their inner ends are riveted over.

2 figures, 8 claims.

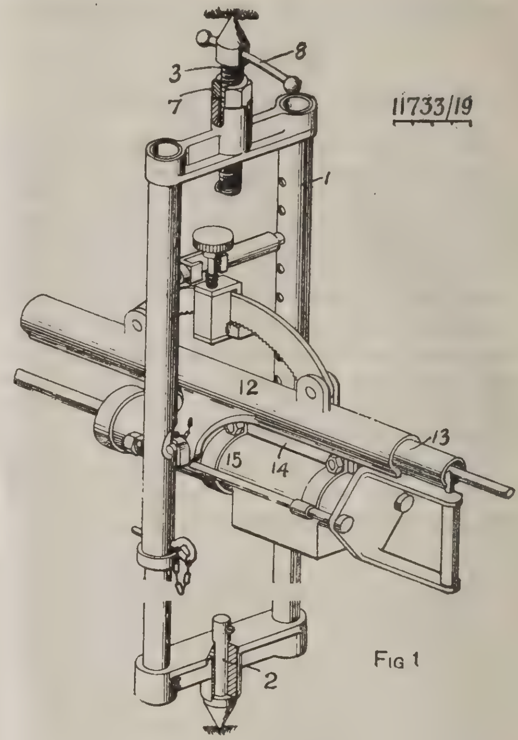


Fig 1

11,734. 8 July. S. Fisher, Transvaal, Union of South Africa.

Class 85.4.

Rock Drill Feeding Device.

To provide a feeding device for light hammer drills, a helical spring enclosed in the drill carrying slipper is compressed by hand, and being held in compression by pawls which engage in a rack, applies periodically adjustable feeding force to the drill.

The cradle 1 slidably accommodates a slipper 4 formed with a lug 5 to which the hammer drill is clamped.

The slipper 4 is fed forward by a spring 13 which is compressed periodically by pressing forward the anchor 9 provided with pawls 10, 11 which engage the rack 12 and hold the spring 13 in compression.

In a modification, the cradle, in the form of a bar, is encircled by the slipper, consisting of a tube which is supported on the bar by an end flange and a flange on the anchor. Teeth, formed on the surface of the bar, are engaged by a pawl attached to the anchor.

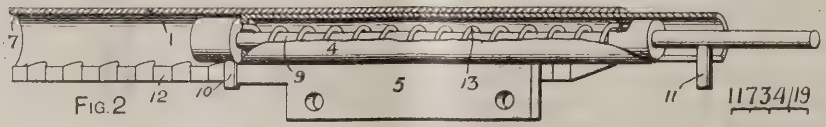


Fig. 2

5 figures, 6 claims.

Illustrated Notes—*continued.*

11,736. 8 July. Alice Condy, N.S.W.

Class 45.2.

Bedstead.

To support a mosquito net on a bedstead fitted with one or more storage compartments 6, rods 10 with knobs 11 are slidably mounted in recesses 9 in bed posts 7, 8, the rods being held in any desired extended position by pins 13 passing through holes 14 in the rods.

In a modification, the rods 10 are replaced by slats slidably mounted in bearings on the posts and retained by thumb-screws.

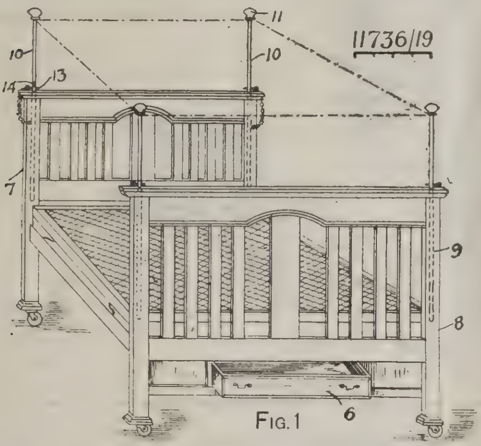


Fig. 1

3 figures 2 claims.

11,751. 9 July. G. Rigg, Victoria.

Classes 16.8; 15.2; 16.1.

Blast Roasting Ore.

To maintain the permeability of the ore charge during blast roasting, the clinker formed on the grate 27 of a blast roasting pot 20 is periodically broken up by spikes 35, secured to a perforated plate 32, and passed through perforations 28 in the grate by operating the telescopic lever 41.

Hollow spikes may be used, in which case air holes in the plate 32 are not required.

In a modification, the spikes 35 are twisted and rotatably mounted in the plate 32, and caused to rotate on passing through perforations in a supplementary plate beneath the grate.

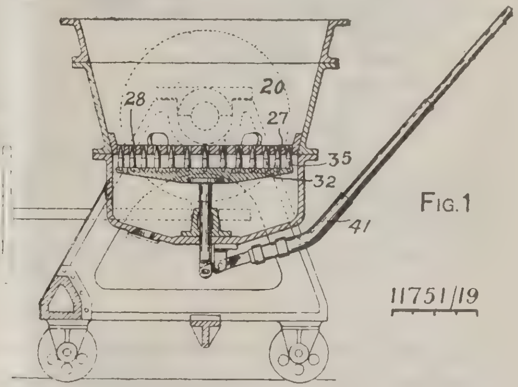


Fig. 1

10 figures, 11 claims.

11,762. 10 July. The British United Shoe Machinery Company of Australia Proprietary Limited, *assignee of* B. Jorgensen, *act. inv.*, Mass., U.S.A.

Class 44.53.

Upper Pulling Machine.

An upper pulling machine in which an additional upper pulling movement is imparted to the toe gripper after the machine has come to rest with the upper held under tension by rearward pressure on a handle 156, which connects a pawl 124 with a ratchet wheel 94 operating a rock shaft 76 connected to a lever 38 and so imparts an updrawn movement to the toe gripper 28.

Forward pressure of the handle 156 moves the pawl 126 against the tension of a positioning spring, situated within the handle, into engagement with the teeth 128 of a ratchet wheel 96 imparting updraw movement to the side grippers 2. Upon a continued pull, the rock shaft and ratchet wheel 96 are moved against the tension of the spring plunger 88 to impart downward movement to the rear ends of the side gripper lever 8, thus imparting additional updraw to the side grippers. Releasing the handle causes the rock-shaft and pawls to be restored to normal position through spring plungers 88 and 90.

To further tension the toe portion, the ratchet wheel 96 moves in unison with the ratchet wheel 94 causing the lever arm 116 to uplift links 120 moving the side gripper levers 8 downwardly through a pawl 166 mounted on a plate 170 and connected by a link 172 to a lever 174 pivoted on a fixed shaft 176 and operated by a cam 180, spring 182 returning to normal with the plate 170 in engagement with stop pin 184.

[*Illustration next page.*

Illustrated Notes—*continued.*

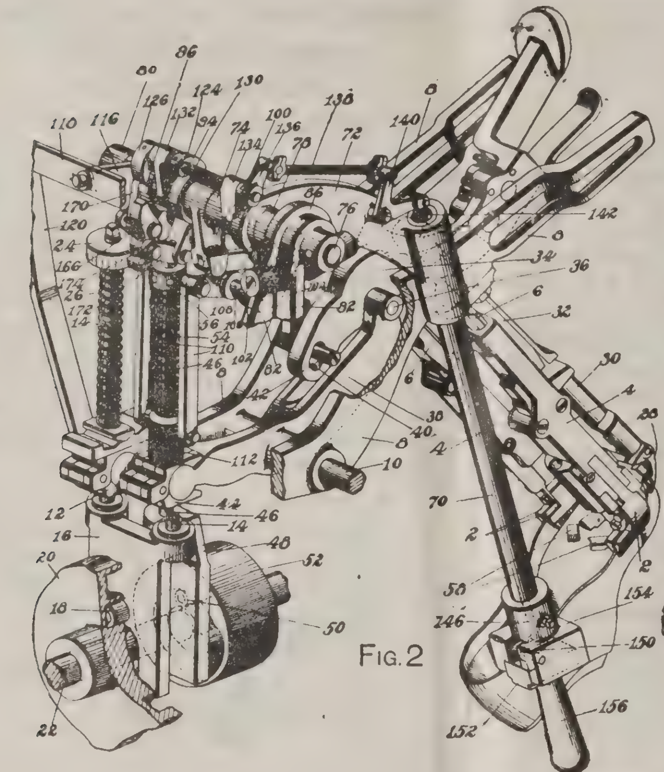


FIG. 2

11762/19

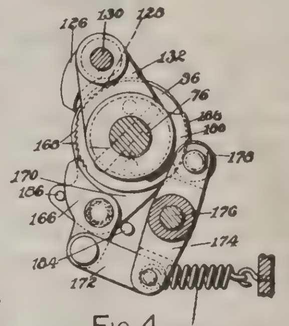


FIG. 4

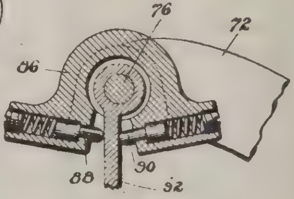


FIG. 5

11 figures, 12 claims.

11,761. 10 July. The British United Shoe Machinery Company of Australia Proprietary Limited, *assignee of* J. H. Connor, A. T. Foster, H. E. Martin, and F. E. Toothaker, United States of America, and A. Bates, England, *act. invs.*

Classes 44.57; 44.1.

Turnshoe Manufacture.

To facilitate the attachment of a counter stiffener to a turnshoe, the heel end of the upper is secured to the sole by lasting tacks and the lining is slit at the shank portion F, thus forming a flat heel seat to which a counter stiffener G, provided with a seat piece G¹ and a shank stiffener G², may be attached prior to turning the shoe.

The stiffener is attached by a nailing machine fitted with a block 28 having spring clips 36 and 50 for clamping the counter in position against a back gauge 54. The gauge has a shoe heel gauge 52 and is resiliently supported by a spring 60 to permit a slight downward movement.

The counter may be temporarily attached by tacks prior to turning, after which the final attachment is performed by progressive nailing.

The counter stiffener may be moulded from one piece of leather with an overlapping joint along the seat portion, or a T-shaped piece of leather may be flanged along the wings which are secured to the seat portion, the extreme ends being left free to permit lateral movement to accommodate the stiffener to slight variations in the width of the shank of the shoe.

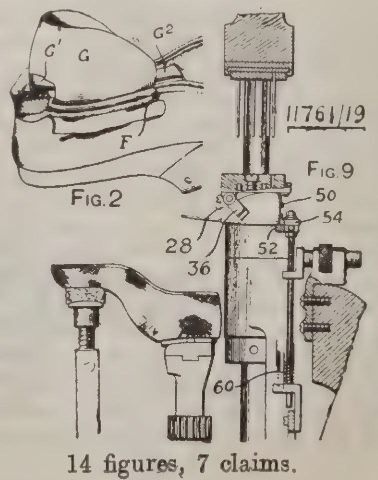


FIG. 2

FIG. 9

14 figures, 7 claims.

Illustrated Notes—*continued.*

11,773. 11 July. D. R. Ross, *act. inv.*, Victoria.

Class 63.2.

Steam Superheater.

A superheater for locomotive and other boilers in which steam is admitted to a header, the compartments of which are so arranged that the steam passes from a central inlet branch to compartments at each end thereof, and thence to the outlet through Field tubes and a series of compartments, the last of which is located centrally and nearest the flue tubes of the boiler.

Saturated steam enters through a branch **m** and passes through passages **k**, compartments **e**, and Field tubes **1** to compartment **t**, and from thence through Field tubes **2** to compartment **d**, from which compartment it travels through other Field tubes and compartment **r** to the final superheated steam compartment **f** and outlet **g**.

Fig. 5

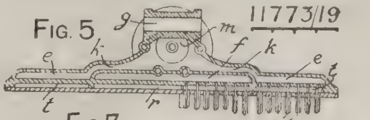
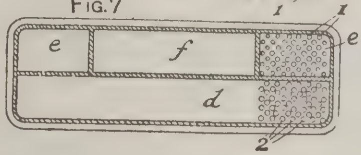


Fig. 7



11 figures, 5 claims.

11,809. 15 July. J. May, South Australia.

Classes 31.2; 30.4.

Cultivator Frame.

To provide an enlarged cultivating surface and clearance for the tines and permit rubbish to pass through the implement, a plurality of sets of triangularly applied frames **A**, **A**^{1} are fixed relatively parallel to each other, and are provided with stiffening stays **B**, **E** and supports **C**, **D** for the tines **X**, the frames being connected to a headpiece **F**.

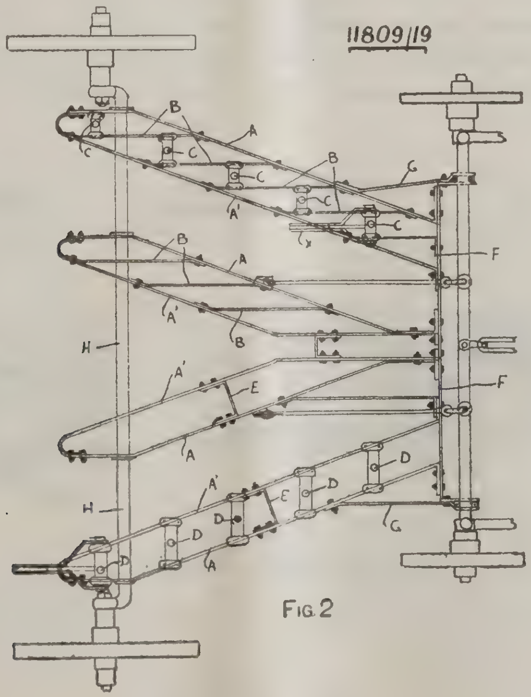


Fig 2

2 figures, 2 claims.

Illustrated Notes—*continued.*

11,873. 22 July. D. F. Downs, Victoria.

Sec. 63A. Including cognate No. 13,592/*19*.

Class 94.9.

Motor Car Locking Device.

To secure motor cars against unauthorized use or interference, a switch lock, by which the ignition circuit can be opened, is mounted upon the dash-board; and a bonnet lock, adapted to automatically snap into locked position upon the fall of the bonnet, prevents access to the car mechanism.

The operating lever 46 of the ignition switch 45 is attached to one end of an extension arm 48, the other end of which is secured to the inner side of the barrel 49 of a lock 50, operated by a key. Two strips of metal 53, 54 are arranged between the lock and the dash-board to prevent removal of the lock by sawing.

The bonnet lock comprises a hasp 18 which enters a hasp slot 27 and forces back the chamfered end of a bolt 33 until it comes opposite a hole 21 in the hasp, through which it is forced by a spring 35, thus securing the bonnet lid to the bonnet board.

To release the lock, the barrel 40 is turned by means of a key, thus actuating an arm 42 which contacts with the pin 34 and retracts the bolt 33.

FIG. 9

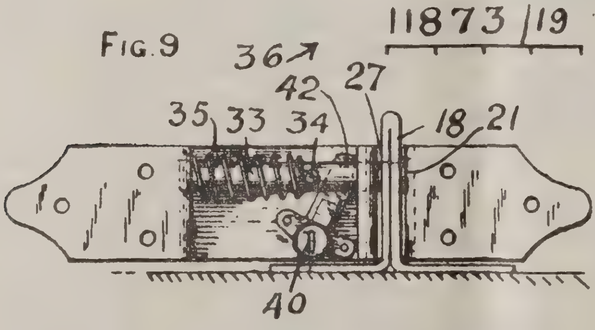
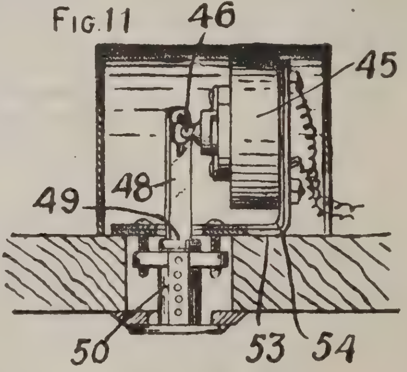


FIG. 11



13 figures, 12 claims.

Illustrated Notes—*continued.*

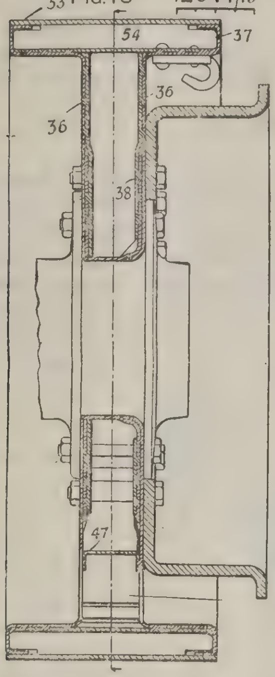


Fig. 18 12044/19

12,044. 7 Aug. Budd Wheel Corporation, Penn, United States of America, *assignee of* C. Schenck, *act. inv.*

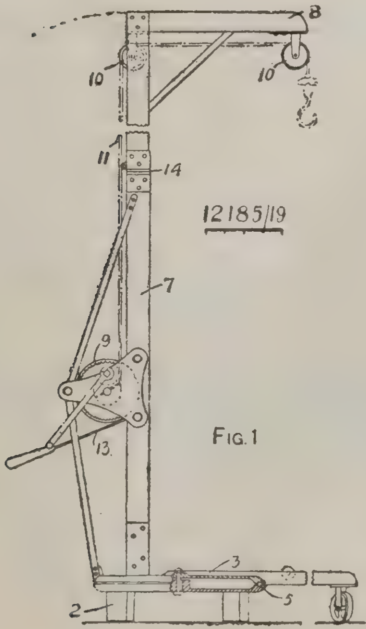
Class 97.2.

Truck Wheel.

A rigid wheel for motor trucks and the like, in which the rim **53** is supported on two metal disks **36** spaced apart by U-shaped radial and transverse braces **38** and **47** suitably secured thereto, as by spot-welding.

The rim is stiffened by transverse T-shaped braces **54** supported in peripheral channels **37** and welded thereto.

20 figures, 42 claims.



12185/19

Fig. 1

12,185. 20 Aug. E. Phillips, *communicatee of* J. N. Goudie, *act. inv.*, Scotland.

Class 59.3.

Jib Crane.

A jib crane which is mounted upon feet **2** spaced apart to admit a truck whereby the crane is rendered portable, and in which the jib is carried upon a load-supporting platform **3** revolubly mounted on ball bearings **5**.

The jib is fitted with hoisting gear **9** and an overhanging arm **8**, and the rope **11** passes over pulleys **10** and around drum **6** which is fitted with a band brake **13**. The crane may be reduced in height by folding it at the hinge **14**.

In a modification, the crane is fitted with luffing mechanism, for moving the load in a horizontal path, comprising a rocking-beam equipped at opposite ends with pulleys and fulcrumed on the free end of the jib, the beam being rocked by a hand-wheel acting through a screw-and-nut mechanism.

2 figures, 5 claims.

Illustrated Notes—*continued.*

12,303. 28 Aug. J. M. E. Franc, France.

Classes 25.4 ; 25.2 ; 25.6.

Washing and Drying Machine.

A clothes washing and drying machine in which a cylindrical chamber **a**, rotated by hand or power, is provided with ribs **k** for rolling and beating the clothes and with a piston **o** mounted upon a hollow screw **f** through which washing and rinsing solutions are introduced.

In drying the clothes a nut **r** mounted upon the screw **f** is prevented from rotating by a pawl and the piston **e** is forced along the cylinder by the screw, squeezing the water out of the clothes through openings **i**.

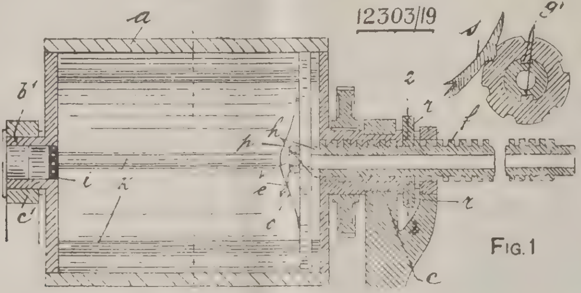


Fig. 1

4 figures, 5 claims.

12,338. 2 Sept. J. Shearer, S.A.

Class 30.4.

Lifting and Steering Ploughs.

To raise the rear portion of a plough for adjusting purposes, a lever **E** pivoted to the rear wheel standard **B** is connected by a chain **J** to a lug **L** formed on the boss **C** supporting the rear of the implement, and, when depressed to allow the stop-collar **S** to be adjusted, is held in position by a notched bar **R**. A rack **M** normally holds the lever in its elevated position, the boss **C** resting on the stop-collar **S**, and when released, the lever may be laterally swung for steering purposes.

2 figures, 3 claims.

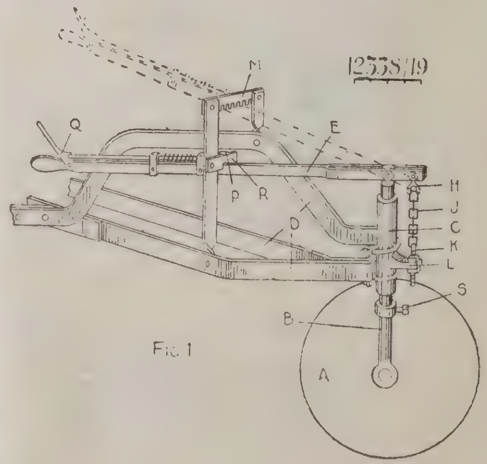


Fig. 1

Illustrated Notes—*continued.*

12,363. 4 Sept. The Australian Wood Pipe Company Limited, *assignee of* F. T. Burnett, *act. inv.*, New South Wales.

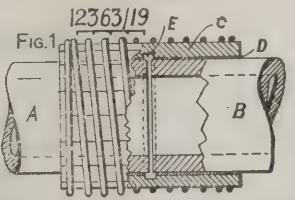
Class 74.5.

Flexible Pipe-joint.

To allow flexibility the adjoining ends of pipes **A**, **B** are joined by a sleeve coupling of wire or hoop-bound wood staves **C** in which an annular groove **E** or a series of recesses is formed so that the water in the pipe may have access to the fibres. A grouting of plastic material **D** is placed on the pipe ends to form a bed for the staves.

In a modification, the coupling may be arranged within sockets at each end of the pipe.

Fig.1



6 figures, 4 claims.

12,418. 6 Sept. B. A. Mitchell, Utah, United States of America.

Classes 11.3 ; 60.4.

Vibrating Screens.

To avoid clogging in ore screening, an inclined screen held under tension is subjected to a plurality of minute circular vibrations of high frequency produced by an unbalanced rotor.

The screen **40** is held under tension by rings secured within the arms **43a** of bolts **43** which pass through the frames **30** and are adjustably controlled by the wheel **44**.

The screen **40** is vibrated by an unbalanced rotary vibrator comprising a central casing **47** having end casings **48** supported on a beam **50** secured to the lower wall of the screen frame **30**. Attached centrally to the central shaft **51** is a pulley **52** connected by a belt to a source of power.

The unbalanced rotors **58** working in ball bearings and attached to the ends of the shaft **51** produce high frequency vibrations in the casing, which are imparted to the screen by the bearing blocks **72**, and transmitting plates **68** secured by keys **70** to the tapered end casings **48**.

In modifications, the vibrator is mounted below the screens, leaving the space above the screen free and unobstructed, and the housing **47** may form the casing of an electric motor with the armature mounted on the central shaft.

Air-cooling fans are mounted on the central shaft within the main casing which has at its lower side an air inlet corresponding to an inlet on its supporting block.

The shaft of the unbalanced rotor within the vibrator may be connected by a flexible coupling to the shaft of an electric motor.

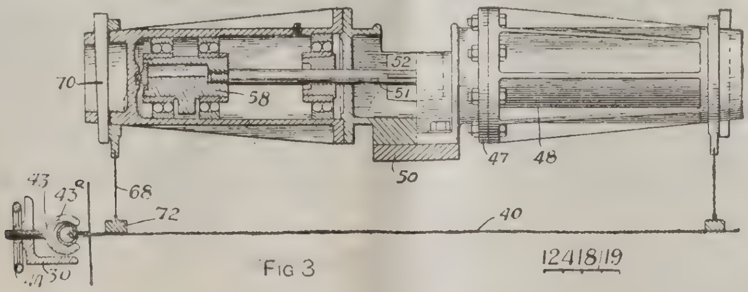


Fig 3

16 figures, 18 claims.

Illustrated Notes—*continued.*

12,458. 9 Sept. The National Cash Register Company, *assignee of* M. M. Goldberg, *act. inv.*, Ohio, United States of America.

Classes 56.2; 55.5.

Registering and Recording Mechanism.

An auditing machine for use in department stores, controlled by a record strip **122** which is perforated at various positions by suitable mechanism at the time of the sale or at any desired time, the perforations according to their location representing the clerk making the sale, the department to which the clerk belongs, the cashier under which the clerk operates, the class of transaction, and the amount of the sales.

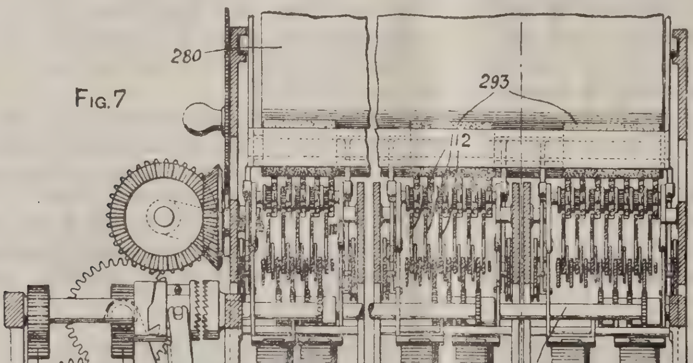
The machine comprises one "Cash," one "Charge," one "C.O.D.," and one grand totalizer for each clerk, one totalizer for each department, one totalizer for each cashier, and one grand totalizer for each class of transaction; also one totalizer which records the number of the perforating machine from which the record strip is taken.

The totalizers are arranged in rows and are actuated by racks **112** operated by differentially rotatable and declutchable shafts **161** common thereto, and electro-magnets **117** retain the totalizers out of engagement with the racks during the differential movement of the latter from normal position.

Upon each cycle of operations of the machine contact pins are lowered and make contact, through the perforations of the record strip, with contact plates placed beneath. Commutator devices, one for each denominational series of amount contact pins, are rotated to an extent corresponding to the amounts represented by the perforations through which the contact pins pass, and thereby energize electro-magnets **194** which operate to declutch the shafts **161** from the driving mechanism and enable the shafts and actuating racks to be arrested in different positions corresponding to the perforations representing the amount.

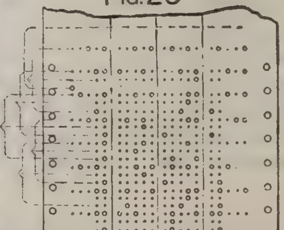
The totalizers print a record on a sheet of paper wrapped about a drum **280** mounted on a sliding frame carrying inking rollers **293**; and means are provided whereby the totalizers may be reset simultaneously to zero position.

Fig. 7



12458/15

Fig. 25



35 figures, 53 claims.

Illustrated Notes—*continued.*

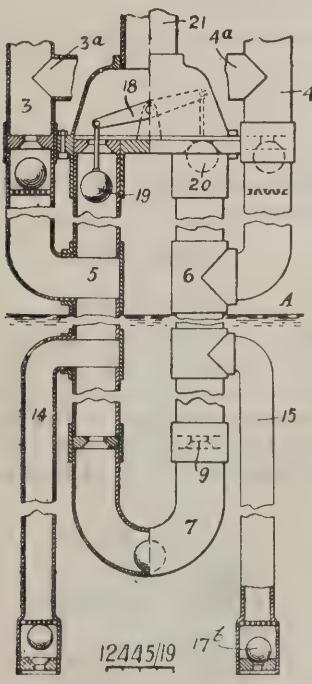
12,445. 9 Sept. T. C. O'Mara, N.S.W.

Class 68.5.

Air Lift Pump.

A pump for raising water, in which compressed air, passing alternately through inlet pipes 3 and 4, is utilized to force a column of water to the delivery pipe 21 through pipes 6 and 5 respectively.

A pair of suction pipes 14 and 15, immersed in the water, are connected with pipes 5 and 6 leading to the common delivery pipe 21 through which they are filled at starting. Air is admitted by a four-way valve to pipe 3, the exhaust outlet 4a being open, closing the valve 19 and causing the lever 18 to open valve 20, and forcing water along the bend 7 to the pipe 6. The ball 10 closes on the valve seat 9, causing a partial vacuum at that point and so drawing water past valve 17b through pipes 15 and 6 into the delivery pipe 21. Pipes 4 and 3a are then opened, in turn, and pipes 3 and 4a closed, causing valve 20 to close and water to be forced through pipes 14 and 5 to delivery pipe 21.



1 figure, 2 claims.

12,534. 16 Sept. D. P. Thiselton, South Australia.

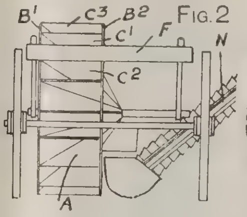
Class 84.37.

Excavator.

An excavator comprising a wheeled framework F having a cone-shaped body A, supported on rims $\mathbf{B}^1$, $\mathbf{B}^2$, pivoted thereto by arms E, a scoop or shield member D being attached by radial arms $\mathbf{H}^1$, $\mathbf{H}^2$ behind the wheel.

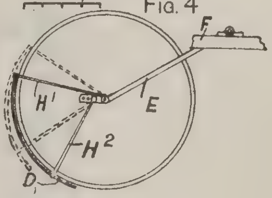
The wheel A is built up of a number of blade members $\mathbf{C}^1$, $\mathbf{C}^2$, $\mathbf{C}^3$ of varying length, between the rims $\mathbf{B}^1$, $\mathbf{B}^2$, and delivers the material excavated on to an elevator N.

Fig. 2



12534/19.

Fig. 4



4 figures, 4 claims.

12,682. 29 Sept. Ateliers Léonard Rocour, Société Anonyme, Belgium, *assignee of* F. Eloy, *act. inv.*

Classes 65.3; 65.9.

Pneumatic Hammer Valve.

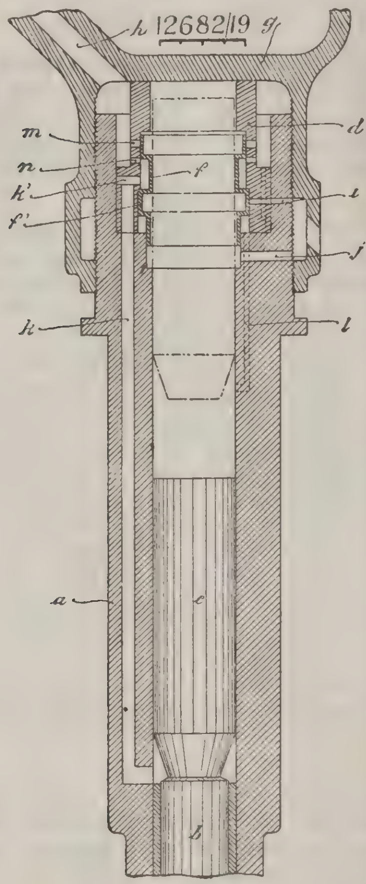
To permit the use in pneumatic hammers of an unported and shorter piston valve of the type having an enlargement which affords an annular actuating face, exhaust of air in the rearward movement of the striker occurs past the edge of the valve when in its back position.

In the position of parts shown in full lines, working air is admitted to the front of the striker **c** by way of **h**, **n**, $\mathbf{k}^1$, and **k**, and exhaust from behind the striker is open through **j**. On the striker entering the valve **f**, the latter is moved forward by compression of the air trapped behind the striker, so that admission occurs at **m** to drive the striker forward and exhaust from in front of the

[*Continued next page.*

Illustrated Notes—*continued.*

striker occurs through **k**, **k**^{1}, and **i**. The valve is moved backward again by working air acting, late in the forward stroke of the striker, through the passage **l**.



1 figure, 1 claim.

12,693. 29 Sept. W. J. Sellars, N.Z.

Date applied for under Intercolonial Arrangements, 29th July, 1919, New Zealand, No. 42,062.

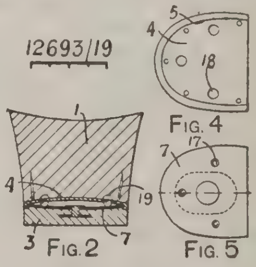
Class 44.41.

Detachable Boot Heel.

To facilitate attachment and increase the resiliency of a boot heel, the fixed and removable portions 1 and 3 are secured to oppositely dished plates 4 and 7, one of which has inwardly projecting flanges 5 adapted to engage with the edges of the other plate.

The plate 7 is provided with projections 17 which engage with holes 18 to lock the plates together, while recesses 19 are formed above the projections to prevent the heel interfering with the resilient movements of the plate.

The plate 7 may be omitted, in which case the flange 5 is made to engage with the edges of the adjacent heel lift, and the detachable part of the heel is then secured by bending a projection formed on the plate 4, into contact with the face of the heel breast.



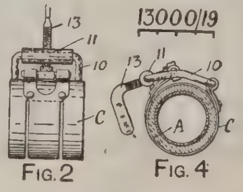
12 figures, 7 claims.

13,000. 23 Oct. H. Turner, senior, South Australia.

Class 74.5.

Hose Clamp.

A clamp in which one end of the band **c** carries a pivoted rotatable lever 13 adjusted by a nut 11 carried by a link 10 attached to the other end of the band which is passed twice around the hose **A** and tightened when the lever 13 is turned downwards.



5 figures, 5 claims.

Illustrated Notes—*continued.*

12,781. 4 Oct. J. J. Brell, New York, United States of America.

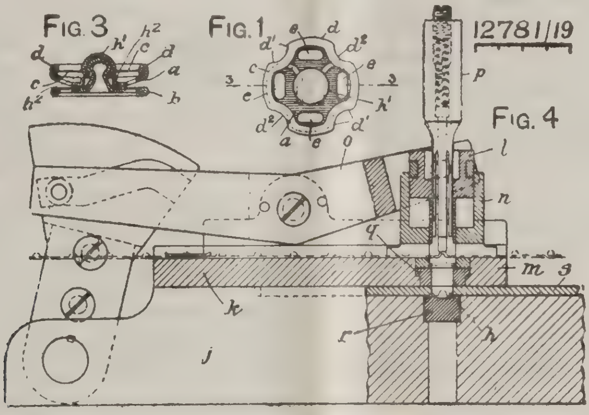
Date applied for under International or Intercolonial Arrangements, 11th Apr., 1919, United States of America, Serial No. 289,248/19

Classes 43.9 ; 73.4.

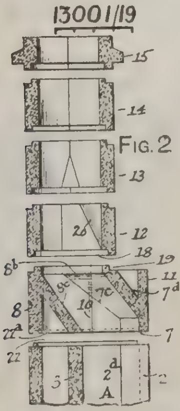
Snap Fastener.

A snap fastener in which a dished socket **a**, carrying a slotted dome **h**¹, has a non-circular edge **d** holding a spring **c**, sewing apertures **e** being provided to secure the fastener to the garment.

The fastener is formed by drawing up the dome **h**¹ and cutting the irregular shaped blank by a punch **l** coacting with a die **m**. A punch **p**, coacting with a die **r**, causes the blank to become cupped and to be then forced into the dial **s**. The spring **c** is set into the cupped blank as the dial advances and the upstanding edge is then subjected to a rolling operation.



6 figures, 7 claims.



10 figures, 8 claims.

13,001. 23 Oct. G. A. Pickering, Vic.

Class 17.1.

Sectional Chimney.

A chimney built up of portable sections of concrete or similar material, in which the throat is made up of a front section 11 and a rear section 8, jointed at 10, and the base is in two sections each containing a joint 2 and a converging side wall 2a, a separate back 3 being held between them; above the throat are one or more diagonally gathered cripple sections 12.

In a modification, the base is rectangular in plan and each side wall with its joint is made up of a pair of sections and is hollow.

Illustrated Notes—*continued.*

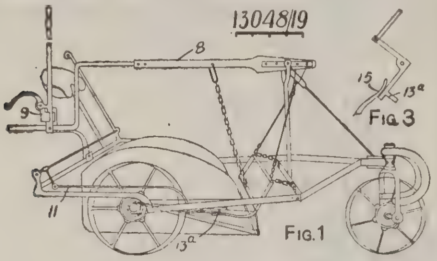
13,048. 27 Oct. T. Vaughan, Qld.

Class 84.33.

Wheeled Scoop.

A wheeled excavating scoop, the front edge of which is lowered into working position by the release of a dog 13ᵃ controlled by a bell-crank lever 11.

The scoop is raised by a lever released by a catch 9, the door 19 being simultaneously raised, and the scoop is retained in raised position by a spring catch 15 which engages the dog 13ᵃ.



4 figures, 4 claims.

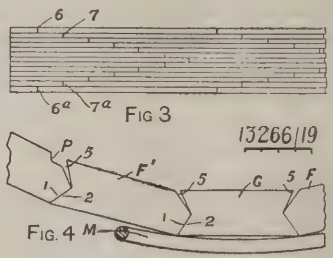
13,266. 11 Nov. S. Williams, Qld.

Classes 74.4; 83.5.

Wood Piping and Troughing.

To render wood troughing water-tight the longitudinal joints are made V-shape with a recess for leak-tight material and the transverse joints are staggered so that the tightening bonds each cover only one or two joints.

The centre stave G is formed with V-recesses at each edge to receive the staves F, F¹ which each have a V-projection on one edge and a V-recess on the other. The upper part of each join is adapted to form a trench 5 which is filled with pitch or tar to form a leak-proof joint. In hot climates an extra recess P is formed to hold a reserve of pitch. Each tightening band M passing around the trough at the staggered joints 6, 6ᵃ, 7, 7ᵃ, seals only one or two such transverse joints while compressing the longitudinal edges 1 and 2 firmly together.



6 figures, 7 claims.

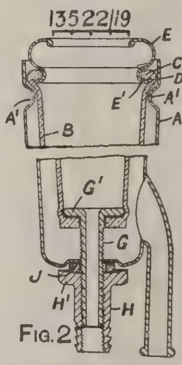
13,522. 3 Dec. The Ridd Company Limited, *assignee of* A. Ridd, *act. inv.*, N.Z.

Class 36.13.

Teat Cup.

To adjustably position the inflation within the casing, a nipple attached to the lower end of the inflation is provided with a screwed stem upon which is screwed a sleeve bearing upon the end of the casing.

The casing A is formed with an inwardly extending ridge A¹ forming a gripping shoulder for the inflation B which is provided with an inwardly projecting bend C forming an undercut groove D within which the flange E¹ of the mouthpiece E is received. The nipple G is formed with a screw-threaded stem and flanged head G¹, bearing on the inflation, and with a sleeve H having a flange H¹ bearing against the washer J outside the casing. By operating the sleeve, the requisite tension on the inflation may be obtained.



4 figures, 4 claims.

Illustrated Notes—*continued.*

13,605. 6 Dec. United States Hoffman Machinery Company, *assignee of* J. B. Spencer, *act, inv.*, New York, U.S.A.

Class 25.7.

Pressing Machine.

A garment pressing machine in which two pressing elements, one stationary and one movable, are provided with steam and suction chambers, the latter having a foraminous press-plate and suction system in connexion therewith for drying the garment after it has been moistened and pressed.

In the stationary element 1 a pipe 8, supplying steam to the heating chamber 6, has a branch 9 with a self-closing valve 14 which feeds a suction nozzle 10. A pipe 21 supplies steam to the chamber 7 to moisten the garment through the perforated plate 17 and press cloth 18, the head 2 being lowered for pressing. To dry the garment, valve 22 is closed and valve 14 opened causing the suction nozzle 10 to withdraw moisture from the garment through perforated plate 17 and pipes 13 and discharge it through the waste pipe 11. The presser head 2 may be similarly provided with steam and suction chambers 28, 29, a suction nozzle 30 being used when it is desired to withdraw moisture from the garment through the head 2.

In a modification, the pipe system is simplified by supplying steam to the buck or press head through a single pipe in turn connected to a steam suction nozzle with a self-closing valve on each side thereof. The valves are normally closed and by opening one or both steam is admitted or suction applied as required.

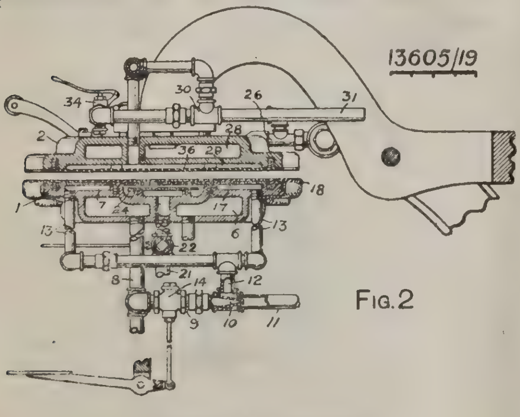


Fig. 2

5 figures, 4 claims.

13,742. 18 Dec. R. W. Lesley, Penn., United States of America.

Class 18.3.

Cement Production.

To utilize low grade carboniferous material, such as shale, lignite, waste or dirty coal, in cement production the argillaceous residue from the destructive distillation of the carboniferous material is conveyed from the retorts **d** by the conveyor **f** and discharged into the hopper **c**, where they are mixed with the required calcareous material fed in from the shoots **c**^{5} and **c**^{6}.

This mixture is fed into the rotary kilns **a** and **a**^{1} fired by the volatile products conveyed by the pipe **e** and valve-controlled branches **e**^{1} and **e**^{2} from the retorts **d**. The residues contain an amount of fixed carbon which supplies a portion of the fuel required during the clinkering of the cement.

The waste gases from the kilns heat the retorts **d** and then pass to the stack **g** and finally to a volatile product recovery plant.

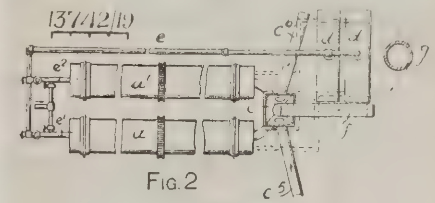


Fig. 2

2 figures, 5 claims.

13,634. 8 Dec. John Heine & Son Limited, *assignee of* S. Stuart, *act. inv.*, New South Wales.

Class 73.8.

Can Heading Machine.

A machine as in 11,280/*13*, in which the forming and closing of the heading seam is effected by two spinning heads, of which one curls the seam while the other locks and closes it, a pressure relief device in the locking head permitting the locking rollers to back-off while passing over irregularities in the seam, and so preserving the mechanism from excessive strains.

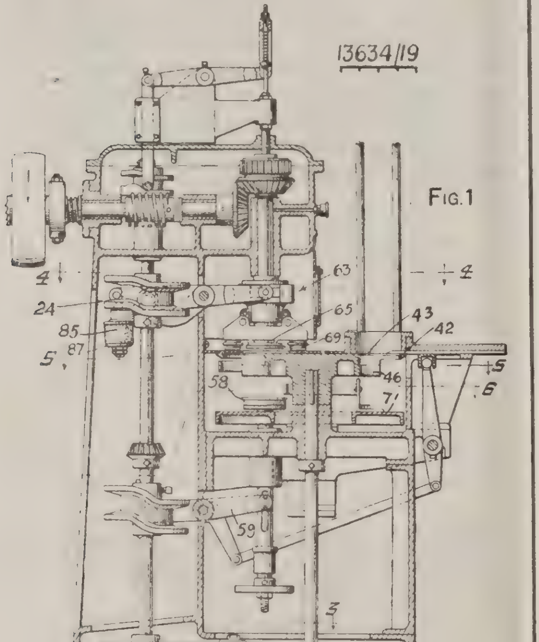
As the turret table 42 rotates intermittently it receives in each pocket 43 a can head with curled edge, and as the can bodies enter the seats 46 below the caps, a body and can head is brought under the preliminary curling head 63, actuated by a cam

[*Continued next page.*

Illustrated Notes—*continued.*

24, a poppet 58 pushing the body upward and engaging the rim flange between the anvil 65 and curling rollers 69 which bear against the curled edge of the cap and infold the seam. The can on the bench is now moved onward by the intermittent actuating means 29 to the closing position, the closing head functioning in precisely the same manner as the curling head, and its rollers operating to compress the seam, hermetically seal the can.

To permit the locking rollers to ride over a high place in the can body seam, a resilient buffer **85**, between the heads **86**, **87** of the locking head means, permits the seaming rollers to back-off, thus avoiding excessive strains on the mechanism.



11 figures, 5 claims.

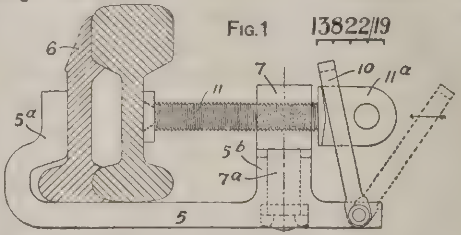
13,822. 29 Dec. W. C. ACFIELD and P. H. JOHNSON, England.

Class 98.2.

Railway Point Clamp.

To temporarily or permanently secure in position the tongues of points, a swivel clamp **5** is employed, the jaw **5a** forcing the point tongue **6** against the rail **12** when the bolt **11** is rotated in a nut **7** formed on the upper part of a shank **7a** housed in the pedestal **5b**. A slotted link **10** fits over the flattened head **11a** of the bolt, and the whole may be locked by a padlock.

To remove the clip, the link **10** is lowered, the bolt partially unscrewed, and the nut **7** raised until an angular part on the stem **7a** is freed from a featherway formed in the pillar, when the bolt is swivelled and the clamp removed.



3 figures, 4 claims.

13,823. 29 Dec. B. F. SEYMOUR, Wash., D.C., United States of America.

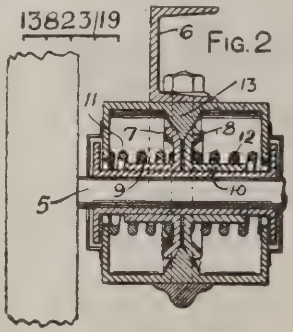
Classes 96.5; 93.9.

Shock Absorber.

A shock absorber in which shocks are transmitted laterally by means of a pair of cone heads **7** and **8**, having sleeve portions **9** and **10** slidable on the axle **5**, which are pressed against a pair of springs **11** and **12** surrounding the sleeves **9** and **10** by a wedging member **13** secured to the chassis **6**.

In a modification, one spring is employed, the sleeves carrying the cone heads being nested and the wedging member formed integral with the shaft.

In further modifications, the mechanism is applied to vertical shafts carrying brackets for searchlights or the like.



5 figures, 8 claims.

Illustrated Notes—*continued.*

13,852. 30 Dec. D.O.T. Societe Anonyme pour l'Exploitation des brevets Descalles, *assignee of* Eugene Maurice Octave Descalles, *act. inv.*, France.

Class 77.5

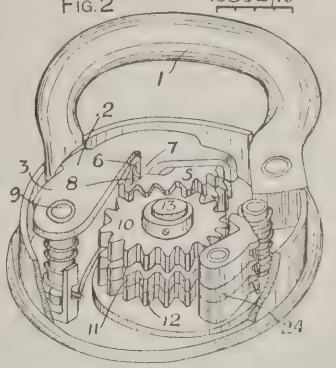
Combination Padlock.

A combination lock in which wheels **10**, **11** and **12** in mesh with the wheels of the locking mechanism **5**, are rotated by means of a knob on the shaft **13** to bring slots **8** of the locking mechanism into line with a slot in the spindle **6**, so that the lug **7** is released and the plate **3** allowed to rock on its pivot **9** to disconnect the projection **2** from a groove in the hasp **1**.

The teeth of the locking device having first been disconnected from those of the combination, a predetermined combination of numbers or letters is set up and the teeth again meshed; the wheel **11** being locked by a spring-actuated pawl **24**, the head of which drops into an enlarged space between two of the teeth of this wheel, thus locking all of the wheels **10**, **11** and **12**.

Upon anti-clockwise rotation of a knob on the shaft **13**, a projection on wheel **10** co-operates with teeth on a slide on wheel **11** to rotate the wheel, and a projection which this wheel carries, co-operating with a movable stop on the wheel **12**, causes it to be rotated. When this wheel is in the desired position the knob is reversed, leaving the wheel stationary and bringing wheel **11** into a position at which the slide thereon becomes disconnected from the stop on wheel **10**, leaving wheel **10** free to be rotated to its position. Slots **8** then being in line, the lug **7** is released and the lock may be opened.

Fig. 2



11 figures, 7 claims.

1920.

13,955. 8 Jan. Superior Manufacturing Company, *assignee of* H. J. and W. R. Woock, *act. invs.*, California, U.S.A.

Class 68.7.

Twin Centrifugal Pump.

To neutralize end thrust, a pair of runners arranged in opposite order are mounted on a common shaft in a single casing and provided with a common inlet and discharge.

The pump casing is divided horizontally by flanges **10** and comprises runner casings **2**, **3** containing runners **13** mounted on a shaft **11**. The casings have flared faces **4** narrowed to form throats **5**, and are connected by a spherical enclosure **6** having a flanged intake **7**. The upper edges of the casings terminate in the common discharge flanged orifice **9**.

Each runner has a wall **14**, curved to reduce the tendency to suck air through the stuffing boxes **19**, a hub **15** integral therewith, and a curved wall **16** spaced therefrom and terminating at the throat **5**, curved vanes **17** connecting the two walls of the runner.

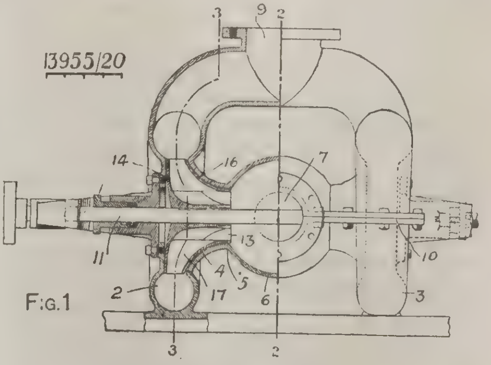


Fig. 1

3 figures, 3 claims.

Illustrated Notes—*continued.*

13,956. 8 Jan. Superior Manufacturing Company, *assignee of* H. J. and W. R. Woock, *act. invs.*, California, U.S.A.

Class 68.7.

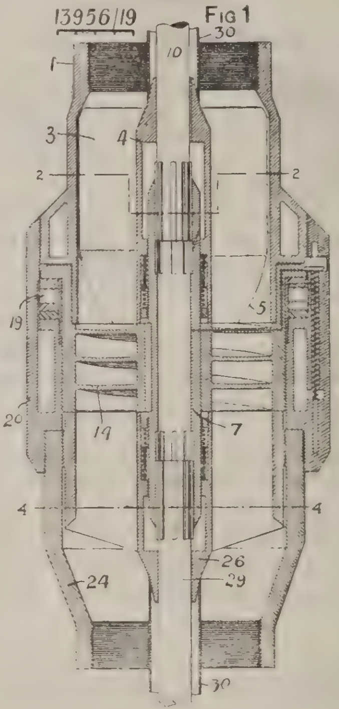
Deep Well Pump.

A multi-stage deep well pump in which the weight of water and metal in the various units is taken off the driving shaft to reduce friction and torsional strain, while automatic lubrication is specially provided for.

The units are spaced at intervals of twenty feet apart in the pump well, and each is operated by a power-driven shaft **10** rotating in a hub **4** carrying vertical vanes **3** with their lower ends **5** turned at an angle. In the hub **4** is a sleeve **7** splined at each end to receive the end of the driving shaft **10**, and the shaft **29** of the next lower unit, packing rings **11**, compressed by springs **12**, preventing leakage.

A double-threaded spiral runner **14** keyed to the sleeve, with its blades pitched oppositely to those of the angled portions **5** of the vanes **3**, rotates on ball bearings **19** in the casing **20**. The casings **1** and **24** are threaded to receive water pipes, and the shafts **10** and **29** are enclosed by tubes **30** which form a water-tight wedging connexion with the hubs **4** and **26**.

Automatic lubrication is provided for by placing oil in the upper tube **30**. The oil circulates by passage **31** along the hub **4**, and through passages **32—36** to a reservoir **22**, from which it is raised by a spiral conveyor **39** to the ball race **19**.



4 figures, 9 claims.

13,957. 8 Jan. C. W. LePlastrier, *communicatee of* Automatic Machinery Company, Indiana, United States of America, *assignee of* G. G. Hallock, G. F. Frederick, and B. Purcell, *act. invs.*

Class 59.6.

Belt Conveyor.

To prevent the formed glass bottles which are being fed to the lehr **10** from interfering with each other, the articles are delivered by a link belt transverse carrier **15** supplied, at various points in its length, by feeding carriers **40** which interoperate in such a manner as to allow bottles to pass on to the main carrier at predetermined intervals.

The bottles are removed from the carrier **15** by a pusher bar **17**, when checked by the blocking bar **19**, and pass on to an inclined pan **26** down which they slide to the lehr belt **11**, a controlling gate **27** being swung across the entrance **28** before the bar **17** advances.

The plungers **18** are operated by bell cranks **20**, link **21**, and lever **22** controlled by a motor-driven cam **25**. To control the delivery from the various independently driven feeding carriers **40** to the belt **15**, deflector bars are employed to divert the articles on to a bevel driven transfer disk **44** which, with the co-operation of a governor star wheel and ratchet, permits the passage of a single article only to the continuously running carrier **15**.

[*Illustration next page.*

Illustrated Notes—*continued.*

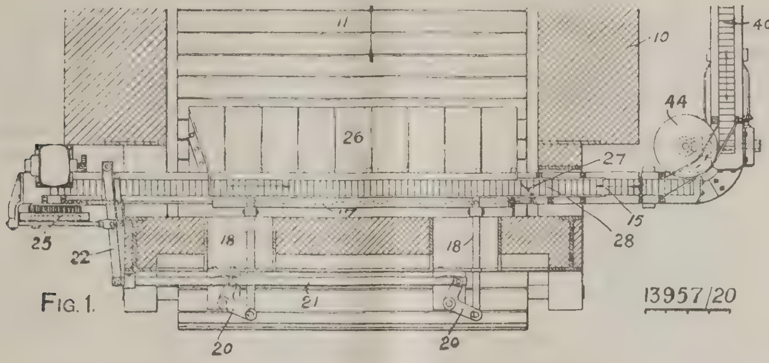


Fig. 1.

8 figures, 6 claims.

13,965. 9 Jan. G. S. Ackley, New York, United States of America.

Class 96.6.

Operating Rolling Stock Brakes.

A brake operating mechanism in which a pair of spirally grooved drum members 7 and 8, carrying a winding chain 13 and check chain 14, are rotated by means of a spur-wheel 9 and a pinion 20 driven by the brake staff 46 which has a squared extension passing through a ratchet wheel 41 and collars mounted on roller bearings in the boss 3.

Vertical slots in segmental flanges 30, concentric to the pinion 20 and co-operating with bolts 32, enable the frame 2 to be shifted to give a direct pull to the brake drum.

In a modification, the ratchet wheel is integral with the brake staff. In a further modification, the check chain 14 extends rearwardly so that brakes at either end of the vehicle may be operated simultaneously.

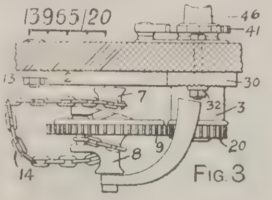


Fig. 3

7 figures, 6 claims.

14,021. 14 Jan. H. Walker, N.Z.

Class 89.8.

Fume Destroying Composition.

To destroy explosive fumes and settle dust in mines, a composition consisting of potassium permanganate 7 lb., potassium chlorate 1½ drams to 4 oz., and gum arabic 1 dram to 4 oz. is made into cartridges, or sticks of ½ lb. in weight for machine holes and 2 oz. for hand-drilled holes.

The composition when fired with the explosive charge liberates oxygen and creates a damp atmosphere which serves to ensure complete combustion and maintain the necessary proportion of oxygen in the atmosphere, while the moisture throws down the dust and other suspended matter.

No drawing, 3 claims.

Illustrated Notes—*continued.*

14,062. 19 Jan. J. A. Mitchell, New South Wales.

Classes 34.1; 28.5.

Oil Extraction.

A portable leaves container 4, for use in the extraction of essential oils from plants, which has a perforated bottom and sides 5, 6 and angle irons 23 fixed externally to the walls to support the container 4 in a vehicle frame.

The cover 10 has a discharge pipe 11 having a lifting ring 12, and is provided with slots 13 corresponding with similar slots in the container flange 7 and the top flange 15 of the furnace shell and adapted to receive hinged bolts 19 forming a steam-tight joint. The outer shell 14 of the furnace is supported on four legs 16 laterally joined by plates 17 whereby a fire-tunnel 18 is provided.

In a modification, the outer shell instead of having a fire-tunnel may have a suitably constructed fire-box, bars, grate, chimney, and other boiler fittings.

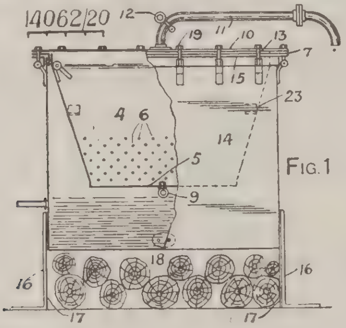


Fig. 1

8 figures, 4 claims.

14,104. 23 Jan. W. R. Beldam, Eng.

Date applied for under International or Intercolonial Arrangements, 23rd Jan., 1919, Great Britain, No. 1750/*19*.

Class 60.7.

Metallic Packing.

A metallically-packed fluid-tight joint in which the packing and the member it surrounds are of paramagnetic material and are drawn together by a magnetizing coil.

The packing rings E, which comprise several segmental and overlapping members E^1 held together by a steel spring F, are housed within the stuffing-box B^2 and are divided into two groups by compression springs G. A magnetizing coil L surrounds the piston rod C^1 and the resultant flux traverses the packing rings and rod in such a direction that a magnetic pull is exerted between the two. A similar effect occurs between the cylinder wall A and the piston rings.

A variable resistance arranged in series with the coil L and the source of current enables the tightness of the packing to be regulated.

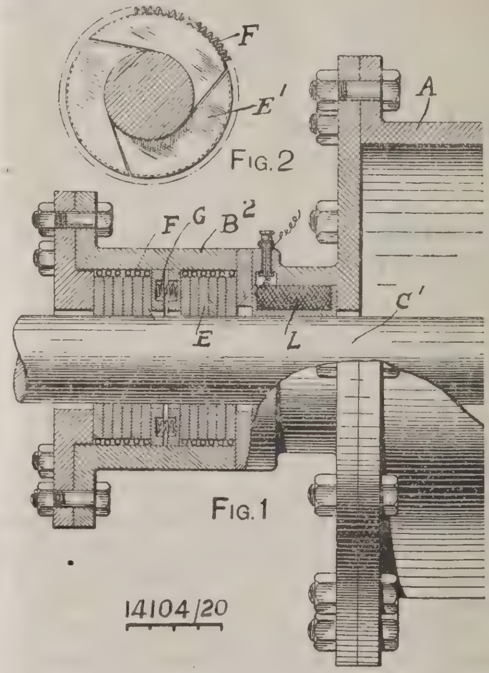


Fig. 2

Fig. 1

3 figures, 5 claims.

14,313. 9 Feb. P. F. Daniel, N.Z.

Date applied for under Intercolonial Arrangements, 10th Feb., 1919, New Zealand, No. 41,251.

Classes 66.7; 66.8.

Rotary Valve.

To maintain a gas-tight joint between the surfaces of a rotary valve and its port faces, the valves are constructed in sections which

[*Continued next page.*

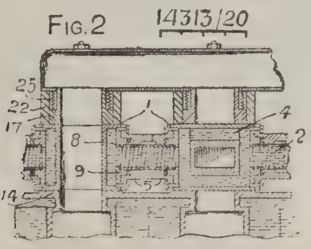
Illustrated Notes—*continued.*

are flexibly connected and housed in adjustable resiliently-held port faces.

The sections 1 are spaced apart by the hollow metallic flexible connexions 2 through which water passes to the hollow cores 4 in the valves for cooling purposes, the flexible connexions also serving as the driving means between the sections. Additional mechanical means to relieve the flexible connexions may be provided, such as toothed couplings 5, the connexions 2 being received within the sockets 8 in the spigots 9. Each valve section is housed between seatings or port faces 14 and 17, the latter being adjustable in caps 22 and pressed against the valves by springs 25.

Lubrication is effected by a felt pad in contact with the valve faces supplied with oil from an exterior source.

In a modification, the valves are rotated by a shaft, gear wheels integral with the valves meshing with gear wheels on the shaft.



4 figures, 4 claims.

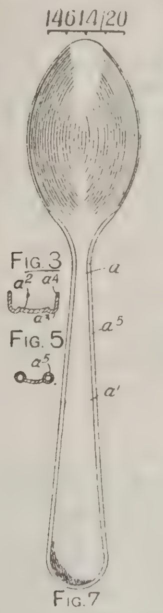
14,614. 6 Mar. J. E. Cooper, England.

Class 76.5.

Spoons and Forks.

To manufacture spoons and forks from a metal blank of uniform thickness without cross rolling, a bead is formed along the periphery of the handle and shank.

The spoon or fork is stamped out of a metal blank having a shank and handle of greater width than the finished article which is subjected to pressure, forming the central portion **a**^{2} into a slight curve and side portions into a semicircle **a**^{3}. The upstanding portions **a**^{4} are then pressed to form a bead **a**^{5} projecting beyond both front and back faces of handle and shank and extending for a short distance along the rim of the bowl or prong.



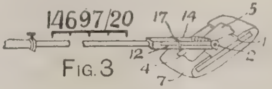
8 figures, 3 claims.

14,697. 11 Mar. H. A. Pyke, N.Z.

Class 25.5.

Window Cleaner.

A window cleaner in which a frame 1 is provided with two spring clips 4 and 5 mounted on a rod 2 and adapted to hold the cleaning material 7 in position. The handle is telescopic and has at one end jaws 12 and 14 which grip the rod 2, the jaws being pivoted together and held in closed position by a link 17.



3 figures 3 claims.

Illustrated Notes—*continued.*

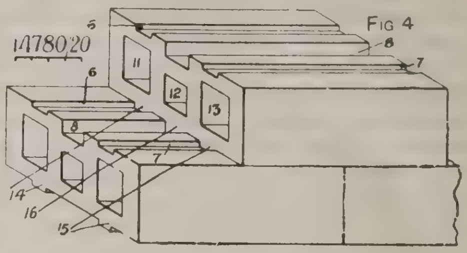
14,780. 16 Mar. M. W. Kemp, Vic.

Class 81.1.

Hollow Building Block.

To construct a wall of interlocking building blocks, each block is formed with longitudinal grooves 6, 7, 8, ridges 14, 15, 16, and passageways 11, 12, 13, the ribs of one block fitting into the grooves of the other. The outer grooves 6 and 7 with the ribs 14 and 15 are for the purpose of diverting moisture, while the rib 16 and groove 8 form interlocking means.

A special unit is used for the formation of corners, and the blocks are held in position by cement.



9 figures, 10 claims.

14,781. 16 Mar. G. A. Bennett and F. B. A. Kirsten, Victoria.

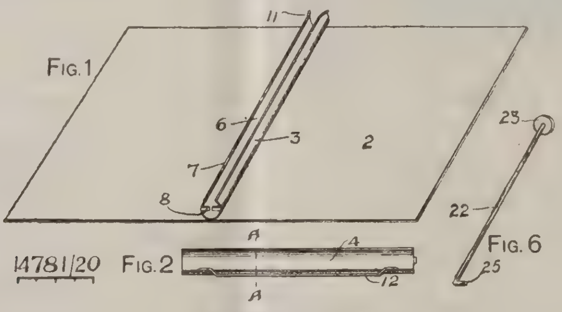
Class 48.8.

Loose-leaf Book.

To enable leaves to be readily withdrawn and replaced, a U-shaped leaf holder 3, extending along the back of the book 2, forms a channel 4 having an open mouth 6 through which the leaves are passed.

The open mouth 6 has in-turned or outturned lips 7 to grip the leaves and one end 11 is flared while the other end is bridged by a tongue 8 to act as a stop. The leaf-holder 3 is secured to the book cover by a retaining wire 12.

Double leaf sheets are held in the holder by placing between the folded sheets a centre pin 22 provided with a head 23 and a foot 25. Single leaves are bound together by a metallic binding tape, and when inserted in the channel are held by the spring lips 7.



11 figures, 11 claims.

Commonwealth Specifications.

The following Specifications are now on sale :—

1904-10.

1 to 20,337, Vols. 1 to 102, complete with title pages, &c.

1911-15.

1 to 7599, Vols. 103 to 140, complete with title pages, &c.
7600 to 7799, Vol. 141, incomplete.
7800 to 8599, Vols. 142 to 145, complete with title pages, &c.
8600 to 18,302.

1916.

1 to 646, and all subsequent accepted Specifications.

The following Specifications, acceptance of which was advertised in *Official Journal* of the 6th July, 1920, are now printed and on sale :—

1919.

9876. Cleghorn.
10,537. The National Cash Register Co. (Fuller).
10,655. Smith.
10,895. Western Electric Co. Ltd. (Reynolds).
11,193. Rowlands.
11,346. Dykes.
11,372. Matheson.
11,393. Baxter.
11,394. Julius.
11,482. Vines & Marsden.
11,524. Brooks.
11,540. Holyer.
11,560. Warner & Palmertz.
11,565. McNeilage (Cunningham).
11,580. Yeates.
11,587. Rintoul, Nolan, & Nobel's Explosive Co. Ltd.
11,597. Carroll & Leighton.
11,624. Ritchie.
11,718. Fredriksson.
11,830. Witham.
11,920. Walsh (Electro-Industrie E. G., —Baumann).
12,053. Hendley (Bramson, Hanson, & Caldwell).
12,062. Vincent.
12,063. Vincent.
12,186. Sloan & Sloan.
12,370. White & Wall.
12,436. Phillips (Taylor-Wharton Iron & Steel Co.—Johnson).
12,720. Western Electric Co. Ltd. (Demarest).
12,766. Moor.
12,767. Blacksher.
12,869. Lowndes.
12,878. Ellis & Hands.
12,889. Hindle, Savage, Liddle, & Dabbs.
13,018. Heffernan.
13,038. Pickering.
13,065. Hosack.
13,123. Henderson.
13,179. Stokes & Smith Co. (Morrison).
13,225. Whaley.
13,268. Hanson.
13,279. Van Oordt.
13,312. Witter.
13,323. Morony & Garling.
13,350. Kennedy.
13,443. Higgins & Gunn.
13,487. Reid.
13,543. Corning Glass Works (Gage & Churchill).
13,548. Stark (Flammang).
13,549. Stark (Flammang).
13,551. Stark (Flammang).
13,552. Stark (Flammang).
13,553. Stark (Flammang).
13,554. Stark (Flammang).
13,555. Tevander.
13,557. Hachmann.
13,558. Hachmann.
13,575. Regan (Shaver).
13,577. Regan (Shaver).
13,581. Tucker & Tucker.
13,601. Aktiebolaget Bofers (Weibull).
13,610. Barnes, Fraser, & Shaw.
13,809. Turri (Hume).

13,633. Warner & Palmertz. Cognate sheet.

C.11920.—4

Commonwealth Specifications—*continued.*

1920.

13,885. Glendale.
13,966. Corning Glass Works (Bailey).
14,013. Automatic Electric Co. (Erickson).
14,248. Conde.
14,281. Crosby & Price.
14,694. Bennett & Kirsten.
14,727. Johnson.
14,959. Scott.

Further particulars will be found in the Illustrated Notes, pages 895 to 925 of Vol. 32.

A list of Patent Offices and Libraries at which Printed Specifications are placed for *free* public inspection is given with the first list of each quarter.

Complete sets of Printed Specifications may be obtained from the Government Printer Melbourne, at 4d. per copy delivered over the counter. Specifications relating to one Group of manufacture, in order as issued, or such of the Specifications (in one Group) as may be selected from those already published, until 80 copies have been supplied, may be obtained on depositing £2. Parcels of 30 Specifications may be purchased at £1. Postage should be added to cheques if parcels are desired to be forwarded by mail. Single copies of Specifications, 1s. per copy, post free.

Printed Specifications are on sale at the Trade Marks Sub-offices, at Commonwealth Bank Buildings, Sydney, and at the Customs Houses, Brisbane, Adelaide, Perth, and Hobart.

Applications for Letters Patent for the period 1904 to 1910 were numbered from 1 to 20,337; for the period 1911 to 1915 from 1 to 18,302; a new series of numbers was commenced on the 1st January, 1916. To avoid confusion when purchasing Specifications, the **number, year,** and **name** of applicant for Letters Patent should be quoted.

Letters Patent Sealed.

Applications for enlargement of the time for payment of the renewal fee may be made on Form P.

The page and year quoted in last column refer to the Journal in which the notice of acceptance of Complete Specification was published.

Names of actual inventors, communicators, assignors, &c., who are not grantee are added in parentheses after the name of the grantee.

No.	Date of Patent.	Name of Grantee.	Abbreviated Title.	Page and Year.
	1918.		*7th July, 1920.*	
8295	12 Aug.	R. W. Baker (W. H. Corless)	Paints, stains and oils	385/*20*
	1919.			
10,342	7 Mar.	F. R. Johnson	Safety guard for presses	318/*20*
10,489	22 Mar.	F. Ljungström	Cooling idle-running turbines	245/*20*
10,784	16 Apr.	A. H. Traeger	Motor cycle gearing device	245/*20*
10,898	1 May	Dr. C. Weizmann	Bacteriological processes	245/*20*
11,021	6 May	Aktiebolaget Ljungströms Ångturbin (F. Ljungström)	Air-cooled locomotive condensers	245/*20*
11,202	22 May	P. N. Nissen	Portable buildings	245/*20*
11,607	30 June	Siemens Bros. & Co. Ltd., and L. de M. C. Ferreira	Electro-magnet	318/*20*
11,668	4 July	E. S. Leaver	Extracting metals	385/*20*
11,677	4 July	W. O'Brien & A. Morse	Fumigated furniture	245/*20*
12,662	27 Sept.	W. P. Heskett	Metal compound powder	246/*20*
12,934	17 Oct.	R. E. Hirman	Soldering composition	385/*20*
	1918.		*8th July, 1920.*	
9415	29 Nov.	G. M. Bowser	Tarred paving	356/*20*
9594	20 Dec.	W. Powrie	Combination box and table	245/*20*
9959	29 May	E. Vaughan	Bedstead fittings	1007/*19*
	1919.			
10,465	20 Mar.	H. W. H. McNalty	Motor radiator cap	385/*20*
12,192	20 Aug.	H. B. Stocks	Scooters	318/*20*

Assignments Registered.

1907.

10,107. "Improvements in internal combustion engines."

Assignment of whole interest *by* David ROBERTS and Charles JAMES *to*

RUSTON & HORNSBY LIMITED. Registered 12th July, 1920.

10,359. "Improvements in internal combustion engines."

Assignment of whole interest *by* David ROBERTS *to*

RUSTON & HORNSBY LIMITED. Registered 9th July, 1920.

10,360. Improvements in internal combustion engines."

Assignment of whole interest *by* David ROBERTS *to*

RUSTON & HORNSBY LIMITED. Registered 9th July, 1920.

1908.

12,524. A new and improved method for the production of pre-digested foods."

Assignment of whole interest *by* William FOWLES and Herbert Watkins PITCHFORD *to*

NUTRESCO LIMITED. Registered 9th July, 1920.

1910.

16,744. "Improvements in governing internal combustion engines."

Assignment of whole interest *by* Alfred Rowe BELLAMY and David ROBERTS *to*

RUSTON & HORNSBY LIMITED. Registered 12th July, 1920.

1911.

1255. "Improved concrete brick and block pipe and tile making machine."

Assignment of whole interest *by* Gertrude JOHNSON *to*

SANDISGOLD CONCRETE BUILDING COMPANY LIMITED. Registered 7th July, 1920.

3443. "Improvements in internal combustion engines."

Assignment of whole interest *by* David ROBERTS, John William YOUNG, and Charles JAMES *to*

RUSTON & HORNSBY LIMITED. Registered 12th July, 1920.

1912.

4736. "Improvements in internal combustion engines."

Assignment of whole interest *by* David ROBERTS and John William YOUNG *to*

RUSTON & HORNSBY LIMITED. Registered 6th July, 1920.

1913.

10,429. "Improvements in vaporisers for internal combustion engines."

Assignment of whole interest *by* David ROBERTS *to*

RUSTON & HORNSBY LIMITED. Registered 9th July, 1920.

1914.

14,247. "Improvements in vaporiser valve boxes for oil engines."

Assignment of whole interest *by* Charles JAMES *to*

RUSTON & HORNSBY LIMITED. Registered 6th July, 1920.

14,248. "Improvements in vaporisers for internal combustion engines."

Assignment of whole interest *by* David ROBERTS *to*

RUSTON & HORNSBY LIMITED. Registered 9th July, 1920.

Assignments Registered—*continued.*

1917.

5967. "Improvements in heat engines."

Assignment of whole interest *by* Fredrick Alfred Edward Jenkins *to*

Charles Fairfax Waterloo Lloyd. Registered 9th July, 1920.

1918.

8840. "An improved apparatus for extracting and collecting resinous and volatile matters from trees and other vegetable growths."

Assignment of one-half share or interest *by* Joseph Evans Harrison *to*

Godfrey Herbert Swanton. Registered 7th July, 1920.

1919.

11,984. "Improvements relating to the manufacture of gasoline and asphalt."

Assignment of whole interest *by* Cecil Woods Le Plastrier *to*

Standard Oil Company of Indiana. Registered 12th July, 1920.

11,985. "Improvements relating to the manufacture of gasoline."

Assignment of whole interest *by* Cecil Woods Le Plastrier *to*

Standard Oil Company of Indiana. Registered 12th July, 1920.

11,986. "Improved process of petroleum distillation."

Assignment of whole interest *by* Cecil Woods Le Plastrier *to*

Standard Oil Company of Indiana. Registered 13th July, 1920.

11,987. "Improvements in petroleum distilling apparatus."

Assignment of whole interest *by* Cecil Woods Le Plastrier *to*

Standard Oil Company of Indiana. Registered 12th July, 1920.

11,988. "Improvements in process and apparatus for petroleum distillation."

Assignment of whole interest *by* Cecil Woods Le Plastrier *to*

Standard Oil Company of Indiana. Registered 12th July, 1920.

11,989. "An improved method of distilling petroleum."

Assignment of whole interest *by* Cecil Woods Le Plastrier *to*

Standard Oil Company of Indiana. Registered 12th July, 1920.

* * *

Licence Registered.

1917.

5542. "Improvements in and relating to connection pieces for electical conduits and the manufacture thereof."

Full liberty, license, power, and authority to the exclusion of all others within the Territory comprised in the States of Victoria, South Australia, Western Australia, and Tasmania, and in the district included in a radius of twenty miles from the General Post Office, in the City of Broken Hill, New South Wales, to use and exercise this invention, and to sell and dispose of all articles manufactured according to the said invention termed conduit fittings during the remaining term of the Letters Patent *granted by* William Alt *to*

Alfred Edward Gerard. Registered 7th July, 1920.

Renewal Fees Paid.

(Names in parentheses indicate original grantees.)

1913.

No.	Name.	Abbreviated Title.	Paid up to—
8606	Universal Metal Lath and Patent Co.	Expanded metal structures ...	4th Apr., 1927
9222	Porter, A. T., and Rider, H. E.	Producing fuel vapour	28th May, 1927
9642	McNab, N. S.	Automatic vending machines ...	5th July, 1927
9676	Azulay Synd. Ltd.	Manufacture of tape, ribbon, &c.	8th July, 1927
9718	Turnbull, H. A.	Water-level regulators	12th July, 1927
9728	Davies, G. L., & Richards, W. E. W.	Manufacture of paint bases ...	14th July, 1927
9820	Nicholas, A. M., & Packer, C. E.	Means for saving gold, tin, &c. ...	21st July, 1927
9829	Ellis, J. N.	Hollow floats	21st July, 1927
9858	Tanczer, J.	Improved cultivator	23rd July, 1927
9859	Jorgensen, L. R.	Dam construction	23rd July, 1927
9860	Harman, A. H.	Friction clutches	23rd July, 1927
10,009	Waters, E. N.	Draught harness	4th Aug., 1927
10,322	Goudie, R.	Sheep shears	28th Aug., 1927
10,632	National Lead Oxide Co. Ltd. (Innes, W.)	Lead oxide	22nd Sept., 1927

1914.

No.	Name.	Abbreviated Title.	Paid up to—
13,912	Petter, E. W.	Internal combustion engines ...	30th Aug., 1927
14,145	Mitchell, J. B.	Cooling liquids	8th Aug., 1927

1918.

No.	Name.	Abbreviated Title.	Paid up to—
7086	Jorgensen, L. R.	Dam construction	18th Apr., 1932

Patents Void through Non-payment of Renewal Fees.

(Names in parentheses indicate original grantees.)

1912.

No.	Name.	Abbreviated Title.	Patent Ceased.
5571	Webb, C. M., & Bach, J. M. ...	Chairs	6th July, 1919
5577	Irving, M.	Resilient wheel	6th July, 1919
5583	Purser, J.	Chaff carrier	8th July, 1919
5584	Kirkham, G. J.	School bags	8th July, 1919
5585	Jörn, P.	Preserving hams, &c.	8th July, 1919
5586	Jarvis, C. R.	Ironing boards	8th July, 1919
5590	Riedinger, E. R., & Fraser, A. ...	Pneumatic tyres	21st July, 1918
5591	Phillips, E.	Explosives	8th July, 1919
5593	Cremer, O.	Orchestral mute	8th July, 1919
5594	Waters, E. N.	Bottle filling machines	8th July, 1919
5596	Davidson, J.	Fish food preparation	8th July, 1919
5601	Bollen, J. H.	Double brake	8th July, 1919
5605	Callinan, A. J.	Lamp globe	9th July, 1919
5606	Austin, A. T., Austin, W. A., McClure, A. A., and Anderson, C. O.	Automatic slack adjuster ...	9th July, 1919
5607	Elliott, W. E.	Button setting tools	9th July, 1919
5608	Elliott, W. E.	Button setting tools	9th July, 1919
5609	Ebener, F.	Lattice work	9th July, 1919
5614	British United Shoe Machinery Co. of Aust. Pty. Ltd. (United Shoe Machinery Co.)	Apparatus for stacking heels ...	9th July, 1919
5616	British United Shoe Machinery Co. of Aust. Pty. Ltd. (United Shoe Machinery Co.)	Trimming insoles	9th July, 1919
5617	British United Shoe Machinery Co. of Aust. Pty. Ltd. (United Shoe Machinery Co.)	Rounding and channeling machines	9th July, 1919
5623	American Speed Indicator Co. ...	Speed indicators	9th July, 1919
5624	Ebbley, N.	Machine for forming tunnels ...	9th July, 1919
5625	Zercho, F. W.	Cabinet	9th July, 1919
5628	Anderson, J. P., and Fritts, C. E.	Electric conductor connectors ...	9th July, 1919
5629	Queneau, A. L. J.	Apparatus for roasting zinc blende	19th July, 1918
5633	Dunavon, J. H.	Grate bar	9th July, 1919
5634	Allan, C. F. F.	Combined grill, water-heater, &c.	9th July, 1919
5641	Lamb, J. M.	Detaching wheels of cycles, &c. ...	10th July, 1919
5642	Day, T. P.	Filling vehicle tyres	10th July, 1919
5644	Burness, N. S.	Hot air cabinet oven	10th July, 1919
5648	British United Shoe Machinery Co. of Aust. Pty. Ltd. (United Shoe Machinery Co.)	Sole rounding machines ...	10th July, 1919
5653	Constantinescu, G.	Carburettors	10th July, 1919
5654	Boys, C. V.	Liquid films	20th July, 1918

Patents Void through Non-payment of Renewal Fees—*continued.*

1912.

No.	Name.	Abbreviated Title.	Patent Ceased.
5661	Kieler, Maschinenbau- A. G., vorm C. Daevel (Zeitz, H. R. O.)	Manufacture of roof tiles ...	11th July, 1918
5663	Eckersley, A.	Carbonator	11th July, 1919
5664	Matthews, R.	Bag holder	11th July, 1919
5666	Smith, S. C.	Hanging bracket	11th July, 1919
5672	Jounneaux, St. C.	Funnel and tin piercer	12th July, 1919
5673	Shearer, D.	Stripper harvesting machines ...	12th July, 1919
5674	Kearns, J.	Resilient tyre	12th July, 1919
5675	Kearns, J.	Shock absorbing vehicle wheel ...	12th July, 1919
5677	Williams, R. J.	Signal operating mechanism ...	12th July, 1919
5681	Harkness, B. G. A. (Robertson, C. C., & Manley, A.)	Milk cocks	9th Mar., 1919
5682	Penny, F.	Bottle washing machines ...	12th July, 1919
5685	McCoy, C. A. V.	Telephone mouthpiece disinfector	12th July, 1919

R. G. FERGUSON,
Deputy Commissioner of Patents.

Printed and Published for the DEPARTMENT OF PATENTS, COMMONWEALTH OF AUSTRALIA,
by ALBERT J. MULLETT, Government Printer for the State of Victoria.

DEPARTMENT OF PATENTS.—PRICE LIST OF PUBLICATIONS.

Patents, Trade Marks, and Designs Acts are on sale at the Government Printing Offices in Sydney, Brisbane, Adelaide, Perth, and Hobart.

Printed Specifications of Inventions and Regulations under Patents, Trade Marks, and Designs Acts are on sale at the Trade Marks Sub-offices, at Commonwealth Bank Buildings, Sydney, and at the Customs Houses, Brisbane, Adelaide, Perth, and Hobart.

Publications in the following list are on sale at the Government Printing Office Melbourne:—

	Price.		Price.
Patents Act 1903	8d.	Patents Act 1909	3d.
Patents Act 1906	3d.	Patents Act 1903–1909	1s.

	Price.
Patents, Trade Marks and Designs Act 1914 (No. 15)	3d.
Patents, Trade Marks and Designs Act (No. 2) 1914 (No. 16)	3d.
Patents, Trade Marks and Designs Act 1915 (No. 8)	3d
Patents Act (Partial Suspension) Act 1916 (No. 13)	3d.
Patents Regulations 1912	1s. 9d.
Statutory Rules 1914, Nos. 174, 188; 1916, Nos. 66, 220; 1919, Nos. 29, 30; 1920, No. 61 ... each	3d.
Commonwealth of Australia Gazettes—Patent Office Special Numbers. Nos. 34, 49, 52, 56, 60, 69, 72 of 1904; No. 2 of 1905 ... each	4d.
Classification of Manufactures and Word Index (edition of 1916, 280 pp.)	2s. 6d
Library Classed Catalogue, including supplement (*post free*)	1s.

THE AUSTRALIAN OFFICIAL JOURNAL OF PATENTS (*post free*)—

Weekly Numbers, published every Tuesday ... each	6d.
Annual Subscription (including Volume of Statistics and Indexes)	25s.

Complete Annual Volumes—

Journals.	Indexes.	Journals.	Indexes.
...	Vol. 1, 1904	Vol. 16, 1912	Vol. 17, 1912
Vol. 2, 1905	Vol. 3, 1905	Vol. 18, 1913	Vol. 19, 1913
Vol. 4, 1906	Vol. 5, 1906	Vol. 20, 1914	Vol. 21, 1914
Vol. 6, 1907	Vol. 7, 1907	Vol. 22, 1915	Vol. 23, 1915
Vol. 8, 1908	Vol. 9, 1908	Vol. 24, 1916	Vol. 25, 1916
Vol 10, 1909	Vol. 11, 1909	Vol. 26, 1917	Vol. 27, 1917
Vol. 12, 1910	Vol. 13, 1910	Vol. 28, 1918	Vol. 29, 1918
Vol. 14, 1911	Vol. 15, 1911	Vol. 30, 1919	Vol. 31, 1919

Vol. of Journal with corresponding Vol. of Indexes	25s

Vols. of Indexes only may be obtained at 7s. 6d. each from Vol. 1 to Vol. 17, and at 10s. each from Vol. 19 onwards

PRINTED COPIES OF SPECIFICATIONS—

Single copies (including postage)	1s.
Parcels of 30 specifications (exclusive of postage)	20s.
Specifications of one Group as issued (up to 80 copies), subscription in advance (exclusive of postage)	40s.
Complete sets as issued (exclusive of postage) ... per copy	4d.

Average weight for parcels posted:—30 specifications, 1½ lbs.; 50, 3 lbs.; 100, 4 lbs.

THE AUSTRALIAN OFFICIAL JOURNAL OF TRADE MARKS (*post free*)—

Weekly Numbers, published every Friday ... each	6d.
Annual Subscription (including Vol. of Name Index and Proceedings)	25s.

Complete Annual Volumes—Vols. 1 to 14, Applications and Proceedings.

Name Index and Proceedings, Commonwealth and State—

1906–7; 1908; 1909; 1910; 1911; 1912 ... each	7s. 6d.
1913; 1914; 1915; 1916; 1917; 1918; 1919 ... each	..

Constituent Particulars of Trade Marks—

Vol. 1, 1906–7	7s. 6d.	Vol. 7, 1914	7s. 6d.
Vol. 2, 1907–9	15s.	Vol. 8, 1915	7s. 6d.
Vol. 3, 1909–10	11s. 6d.	Vol. 9, 1916	7s. 6d.
Vol. 4, 1911	7s. 6d.	Vol. 10, 1917	7s. 6d.
Vol. 5, 1912	7s. 6d.	Vol. 11, 1918	7s. 6d.
Vol. 6, 1913	7s. 6d.	Vol. 12, 1919	7s. 6d.
Trade Marks Act 1905	8d.	Trade Marks Act 1905–1912	8d.
Trade Marks Act 1919 (No. 7)	3d.		

Trade Marks Regulations 1913	1s. 3d.
Trade Marks Rules—Statutory Rules 1914, Nos. 8, 175, 189; 1916, Nos. 64, 97, 221 ... each	3d.

Designs Act 1906	5d.	Designs Act 1912	3d.

Designs Regulations 1906	5d.
Designs Rules—Statutory Rules 1914, Nos. 176, 190; 1916, Nos. 65, 222; 1919, 228 ... each	3d.
Designs Indexes—1909, 1910, 1911, 1912, 1913, 1914, 1915, 1916, 1917, 1918, and 1919 ... each	1s.

Application Forms according to the Schedules to the Patents Act 1903-1909, Trade Marks Act 1905-1912, Designs Act 1906-1912 and the Patents, Trade Marks and Designs Act 1914-1915, may be obtained on application at the Department of Patents, Second Floor Railway Buildings, Flinders-street, Melbourne.

NOTICE.

Sections 106 and 107 of the *Patents Act* 1903–1909 provide that—

> "106. Every person whose name is enrolled in the Register of Practitioners to be kept at the Principal Registry of the High Court or whose name is enrolled as a solicitor of the Supreme Court of a State may practise as a patent attorney without passing the prescribed examination and without being registered as a patent attorney."
>
> "107. No person shall practise or act or describe himself as a patent attorney or as a patent agent or as an agent for obtaining patents unless he is registered or entitled to practise as a patent attorney under this Act.
>
> Penalty: One hundred pounds."

Regulations 155 and 156 of the Patents Regulations 1912 provide that—

> "155. A Register shall be kept by the Commissioner for the Registration of Patent Attorneys."
>
> "156. Patent attorneys shall be entitled to prepare all documents and deeds and transact all business and proceedings for the purposes of the Act and these Regulations and the State Patents Act so far as concerns business in the Patent Office or before the Law Officer, and communications between Patent Attorneys and their clients shall be privileged to the same extent as communications between solicitor and client."

An applicant for a patent or a party to any matter before the Department of Patents may prepare the necessary documents for presentation to, and prosecute the application or matter before, the Department, but, unless experienced in these matters, he is advised to employ a competent patent attorney.

The Department of Patents does not assist in the selection of a patent attorney.

A list of registered patent attorneys, alphabetically arranged, is subjoined:—

ABELL, Edward Garland, 187 Queen-street, Brisbane, Qld.

ALLEN, Thomas Con, Equitable Buildings, George-street, Sydney, New South Wales.

ANDERSON, Alexander (*Charles E. Bernays*), Fitzroy Buildings, 125 Adelaide-street, Brisbane, Queensland.

ASHTON, William A., care of Clem. A. Hack, Collins House, Collins-street, Melbourne, Victoria.

BAYSTON, Frank (*W. S. Bayston and Son*), Market Buildings, 441 Collins-street, Melbourne, Victoria.

BAYSTON, Walter Smythe (*W. S. Bayston and Son*), Market Buildings, 441 Collins-street, Melbourne, Victoria.

BERNAYS, Charles Edwin (*Charles E. Bernays*), Fitzroy Buildings, 125 Adelaide-street, Brisbane, Queensland.

BODYCOMB, George Edward, 282 High-street, St. Kilda, Victoria.

BONNERUP, Peter Madsen, A.M.P. Chambers, St. George's Terrace and William-street, Perth, Western Australia.

BURGESS, Charles Stanley, 49 William-street, Norwood, South Australia.

CALLINAN, Anthony James, National Mutual Buildings, 395 Collins-street, Melbourne, Victoria; and Ferry's Chambers, 14 Castlereagh-street, Sydney, New South Wales.

COLLISON, Arthur Gore (*Collison and Co.*), Eagle Chambers, King William-street, Adelaide, South Australia; and 483 Collins-street, Melbourne, Victoria.

COLLISON, Charles Nicholas (*Collison and Co.*), 483 Collins-street, Melbourne, Victoria; and Eagle Chambers, King William-street, Adelaide, South Australia.

COOKE, John Herbert, 75 King William-street, Adelaide, South Australia.

DAVIS, William Joseph, Bull's Chambers, 14 Moore-street, Sydney, New South Wales.

GRAHAM, Charles Edward (*Edwd. Waters and Sons*), Culwulla Chambers, 67 Castlereagh-street, Sydney, N.S.W.; and Royal Insurance Buildings, 414–418 Collins-street, Melbourne, Victoria.

GRIFFITH, Arthur (*Griffith and Hassel*), Record Chambers, 77 Castlereagh-street, Sydney, New South Wales.

HACK, Clement Alfred, Collins House, Collins-street, Melbourne, Victoria.

HEDGES, Percy (*Hedges and Co.*), Fink's Buildings, Elizabeth and Flinders streets, Melbourne, Victoria.

HENDLEY, Sidney, Fink's Buildings, Elizabeth and Flinders streets, Melbourne, Victoria.

HEPBURN, Charles Graham, Gladstone Chambers, 90 Pitt-street, Sydney, New South Wales.

KELSON, Victor Jasper, 17 Queen street, Melbourne, Vic.

LE PLASTRIER, Cecil Woods (*Phillips, Ormonde* (*Inc.*) *Pty. Ltd.*), Lombard Buildings, 17 Queen-street, Melbourne, Vic.

MADDEN, Augustine Thomas, 454 Collins-street, Melbourne, Victoria.

MANNERS, William George, corner of Maritana and Egan streets, Kalgoorlie, Western Australia.

MASSEY, Albert Richard William, Challis House, Martin-place, Sydney, New South Wales.

MASSEY, George, Post Office Chambers, Pitt-street, Sydney, New South Wales.

MICHELL, Anthony George Maldon, 450 Collins-street, Melbourne, Victoria.

MONASH, John, Collins House, 360 Collins-street, Melbourne, Victoria.

NEIGHBOUR, Arthur George Lloyd, care of Anthony James Callinan, 395 Collins-street, Melbourne, Victoria; and 14 Castlereagh-street, Sydney, New South Wales.

NEWELL, Percy Harwood, care of Fred Walsh, George and Wynyard streets, Sydney, New South Wales.

NEWTON, Perceval Manfield, Fink's Buildings, Elizabeth-street, Melbourne, Victoria; and Challis House, Martin-place, Sydney, New South Wales

NEWTON, William Manfield, Challis House. Martin-place, Sydney, New South Wales.

PHILLIPS, Edwin (*Phillips, Ormonde* (*Inc.*) *Pty. Ltd.*), Lombard Buildings, 17 Queen-street, Melbourne, Victoria.

SACHSE, Arthur Otto, 454 Collins-street, Melbourne Victoria.

SIGMONT, Walter (*Edwd. Waters and Sons*), Royal Insurance Buildings, 414-418 Collins-street, Melbourne, Victoria and Culwulla Chambers, 67 Castlereagh-street, Sydney, New South Wales.

SMITH, Hider, 95-97 Swan-street, Richmond, Melbourne, Victoria.

SPARROW, Richard, Austral Chambers, Barrack-street, Perth, Western Australia.

SPRUSON, Wilfred Joseph, "Daily Telegraph" Buildings, King-street, Sydney, New South Wales.

STONE, John Jasper, 30 Drummoyne-avenue, Drummoyne, Sydney, New South Wales.

TURRI, George Garibaldi (*G. G. Turri and Co.*), "The Rialto," 497-499 Collins-street, Melbourne, Victoria.

U'REN, George Albert (*Phillips, Ormonde* (*Inc.*) *Pty. Ltd.*), Lombard Buildings, 17 Queen-street, Melbourne, Victoria.

WALKER, William, 156 King-street, Sydney, N.S.W.

WALSH, Fred, George and Wynyard streets, Sydney, New South Wales.

WATERS, Edward (*Edwd. Waters and Sons*), Royal Insurance Buildings, 414-418 Collins-street, Melbourne, Victoria; and Culwulla Chambers, 67 Castlereagh-street, Sydney, New South Wales

08
u7

Vol. 32.] 1920. [No. 28.

Tuesday, 27th July.

[Registered at the General Post Office, Melbourne, for transmission by post as a newspaper.]

THE

Australian Official Journal of Patents.

SEAL OF THE PATENT OFFICE COMMONWEALTH OF AUSTRALIA
P
A
T
N

PRICE (including postage) :—Single Copy, 6d. Annual Subscription (including volume of Statistics and Indexes), 25s. Obtainable at the Government Printing Office, Melbourne.

By Authority:
Albert J. Mullett, Government Printer, Melbourne.

C.12057.

A Personal Appeal

IF THE PEOPLE of Australia saved the sixpences, shillings, and half-crowns, which they would hardly miss from their weekly expenditure, they could easily raise £10,000,000 as a loan for Repatriation.

THEY CAN do this by investing their savings in the new issue of **War Savings Certificates,** or by joining a War Savings Group for the purpose of regularly investing their weekly contributions.

THE CERTIFICATES never fall in value. They have Australia's guarantee behind them. They can be cashed at any time at any Bank with interest added, after the first twelve months, as per scale endorsed on the Certificate.

HOW THE MONEY GROWS

12s. will make **£1** in 10 years
£6 will make **£10** in 10 years
£60 will make **£100** in 10 years
15s. 6d. will make **£1** in 5 years
£7 15s. will make **£10** in 5 years
£77 10s. will make **£100** in 5 years

War Savings Certificates

£5 3s. per cent. Compound Interest.

NOW ON SALE AT ALL BANKS AND POST OFFICES
CASHABLE AT ANY TIME AT ANY BANK

For further information write to the Secretary, Victorian War Savings Committee, 123 Queen Street, Melbourne.

The Australian Official Journal of Patents

[*Registered at the General Post Office, Melbourne, for transmission by post as a newspaper.*]

Vol. 32.] 27th July, 1920. [No. 28.

All communications to be addressed to the Commissioner of Patents, Railway Buildings, Melbourne, Victoria.

[The Department of Patents does not guarantee the accuracy of its publications, or undertake any responsibility for errors or omissions or their consequences.]

CONTENTS.

Notices— Page

Warning to the Public 1035
Rule of Practice 1036
Official Circulation 1036
Supplement to Classification and Word Index 1037

Commonwealth—

Applications Received 1045
Corrigenda 1054
Provisional Specifications Accepted ... 1055
Complete Specifications Lodged 1055
Application for Patent dated other than Date of Lodgment 1056

Commonwealth—*continued.* Page

Applications with Provisional Specifications Lapsed, Abandoned, or Withdrawn ... 1056
Applications with Complete Specifications (not open to Public Inspection) Lapsed, Refused, Abandoned, or Withdrawn ... 1056
Amendment Made 1057
Specifications open to Public Inspection before Acceptance 1057
Complete Specifications Accepted ... 1059
Illustrated Notes 1060
Commonwealth Specifications 1079
Letters Patent Sealed 1080
Renewal Fees Paid 1081
Patents Void through Non-payment of Renewal Fees 1082

NOTICES.

WARNING TO THE PUBLIC.

The Public are notified that entries in the *Australian Official Journal of Patents* under the headings—

Applications with Provisional Specifications Lapsed.
Applications with Complete Specifications Lapsed.
Applications with Complete Specifications (open to public inspection) Lapsed.
Applications in respect of which Complete Specifications have been Accepted but on which Letters Patent have not been Sealed.
Patents void through non-payment of Renewal Fees.

must not be accepted as final, as under Regulations 7 and 8 of the Patents (Temporary) Regulations 1914 the Minister or the Commissioner may in certain cases defined in the Regulations extend the time prescribed by the *Patents Act* 1903–1909 for doing any act or filing any document.

The Patent Office will furnish, on request accompanied by the prescribed search fee of One Shilling, definite information, so far as possible, as to the position of any particular Application or Patent.

C.12057.

NOTICES—*continued.*

Rule of Practice.

EXAMINATION OF APPLICATION AND SPECIFICATION.

The examination in accordance with Sections 39 and 41 of the *Patents Act* 1903-1909 of an application and specification will not be proceeded with until the application for the patent consists of the following documents:—(1) Form of application; (2) Provisional or Complete Specification with true copy thereof; (3) Drawings (if referred to in the specification) prepared on paper prescribed by the Patents Regulations 1912 with a true copy thereof prepared on paper or tracing cloth; and (4) In the case of an application made in terms of Section 121, (*a*) a copy or copies of the specification or specifications and drawings, or documents corresponding thereto, filed or deposited by the applicant in the Patent Office of the Foreign State or British Possession in respect of the first foreign application, certified in the manner provided by Rules of Practice; and (*b*) If the specification or other document required under (*a*) is in a foreign language, a translation thereof verified in the manner provided by Rules of Practice.

The examination in accordance with Sections 39, 40, and 41 of the Patents Act of a complete specification, lodged in connection with an application for a patent accompanied by a provisional specification, will not be proceeded with until the specification is accompanied by a true copy thereof and drawings (if referred to in the specification) prepared on paper prescribed by the Patents Regulations 1912 with a true copy thereof prepared on paper or tracing cloth.

R. G. FERGUSON,
Acting Commissioner of Patents.

Official Circulation.

The *Australian Official Journal of Patents* is available for free public inspection at the Trade Marks Sub-offices, at Commonwealth Bank Buildings, Sydney, and at the Customs Houses in Brisbane, Adelaide, Perth, and Hobart on the arrival of the first post after its publication at the Patent Office in Melbourne. Complete files are posted to Government Patent Offices in all parts of the world, and to a large number of Public Libraries and Technical Institutions in the principal cities of Australasia, Great Britain, Europe, America, Africa, and Asia. The *Journal* may also be inspected at the offices of many technical periodicals to which copies are sent in exchange.

NOTICES—*continued.*

Supplement to Classification and Word Index.

The following list comprises alterations and additions up to 30th June, 1920.

In all cases definitions under each class must be read in connexion with the limitation of the group and class heading.

Class 00.7.

Delete "Thermally operated electric switches."

Insert "Thermostats and special thermal details for control of electrical or mechanical devices."

Class 02.6.

Delete "chemical actions"; *insert* "chemical and other actions"—*definition to read*—

High tension apparatus for chemical and other actions; ozonizing by sparking, or non-electrolytic action.

Class 05.7.

Delete the present definitions; insert—

Manual systems.

Automatic systems including special apparatus incident thereto.

Intercommunication systems.

Party line and way station systems.

Systems involving special arrangements for facilitating transmission, or for obviating transmission losses, or overcoming line disturbances.

Metering and time-controlling systems.

Circuit arrangements for subscribers telephones.

Systems adapted for telephonic and telegraphic working over the same line.

Class 07.1.

Insert "dry cells"—*definition to read*—

Single and double liquid cells; dry cells.

Class 08.5.

Cyanide manufacture, see also 09.8.

Class 09.1.

Alcohol by fermentation, see 27.1.

Wood spirit by destructive distillation, see 21.1.

Class 09.2.

Delete "*Grease extraction*"—reference to read—

Wool scour by-products, see 25.4.

NOTICES—*continued.*

Supplement to Classification and Word Index—*continued.*

Class 09.9.

If limited to an application specified elsewhere, see purpose class.

Class 10.2.

Insert "*for rotary shafts*"—reference to read—
Keying details for rotary shafts, see 62.8.

Class 12.1.

Settling processes for water, see 83.1.
Electro-osmotic settling—
  in furnace gases, see 17.4.
  in air, see 90.9.
  in other gases, see 21.5.
  in water, see 28.8.

Class 16.2.

Oil gas retorts, see 21.3.

Class 18.5.

Fused mineral products, see 19.6.

Class 19.1.

Fused mineral products, see 19.6.
Delete "*Exclude moulding machines (see* 70.1) *for plastic bricks when not associated with clay plant.*"

Class 19.6.

Design of bottles and like glass articles not elsewhere specified.

Class 20.2.

Delete the present definitions; insert—
Processes and apparatus not elsewhere specified for the treatment of coal, lignite, peal, and like carbonaceous solid fuel.
Oxidizing and like compositions for use with fuel.
Briquette fuel; mixtures; binding materials.
Machinery for briquetting either fuel, ores, or other materials.
Charcoal and coke production not designed for the production of gas for use elsewhere.
Special carbon material for explosives, chemical reduction, and other purposes.

Insert "*and retorts*"—reference to read—
Furnaces and retorts, see Group 16.

NOTICES—*continued.*

Supplement to Classification and Word Index—*continued.*

Class 20.6.

Delete " &c. by destructive distillation, &c" —*definition to read*—

Production of shale oil.

Furnaces and retorts, see Group 16.

Liquid by-products from gas-works, see 21.5.
Oil separation, see 36.6.

Class 21.1.

Delete the present definitions; insert—

Processes for the production of gas from coal, wood, shale, refuse, or like carbonaceous solid materials, by destructive distillation without the introduction of air or steam.

Special modifications of gas production processes for the production of by-products without the introduction of air or steam.

Gas works plant.

Special processes or apparatus, apart from gas plant combinations, for collection of gaseous or liquid by-products, see 21.5.
Furnaces and retorts, see Group 16.
Coking where gas production is a minor feature, see 20.2.
Shale oil production, see 20.6.

Class 21.2.

Delete the present definitions; insert—

Processes for the production of producer gas or water gas from solid fuel with the introduction of air or steam.

Suction gas plants for all purposes (includcluding plants with pressure blast of air or steam).

Special modifications of gas production from solid fuel, using air or steam, for the production of by-products.

Class 21.3.

Delete the present definitions; insert—

Retorts, plant, and processes for production of permanent gas by dissociation of liquid fuel, including easily fusible fats, without partial combustion.

Production of permanent gas by partial combustion of liquid fuel, including easily fusible fats,

NOTICES—*continued.*

Supplement to Classification and Word Index—*continued.*

Class 21.4.

Delete the present definitions; insert—

Air carburettors and gas enrichers, where the gas is not burned immediately, working at moderate temperatures without dissociation of the fuel including—
  General design of complete plants combining air supply, carburetting, regulation, and storage.
  Carburettors in which air or gas passes through oil, floating oil film, or oil spray.
  Carburettors in which air or gas passes over or through solid absorbents containing oil
  Carburettors in which air or gas passes over oil films in circuitous passages without absorbents.
  Carburettors of types not elsewhere specified.
  Enriching compositions.
  Special oil-feeding means for carburettors and other details not elsewhere specified.

Class 22.4.

Delete—

Vessels and pipes for domestic or retail use of oil.

Insert—

Retail supply of oil.

Delete—*Class* 24.2. *Kitcheners, &c., using solid fuel.*

Insert—*Class* 24.2. *Kitcheners and portable stoves using solid fuel.*

Delete the present definitions; insert—

Fixed or portable cooking stoves and ovens, using solid fuel.
Oven fittings for unspecified heating combinations.
Pot and kettle hangers, stands, and like accessories.
Portable and other stoves, not elsewhere specified.

Portable forges, see **71.6.**
Stoves for soldering, see 73.6.
Trivets, see 24.9.

Class 25.1.

Delete the present definitions; insert—

Compositions of liquid and solid detergents.
Configuration of blocks; moulding devices specially for soap and not for general application.
Plant combinations other than special moulds.

NOTICES—*continued.*

Supplement to Classification and Word Index—*continued.*

Class 27.1.

Delete—*Class* 27.1. *Beer, wine, spirits, &c.*

Insert—*Class* 27.1. *Beer, wine, spirits.*

Delete the present definitions; insert—

Malting, brewing, fermenting or preparation of beer, wine, or other fermented or alcoholic liquors, other than distilled spirits; racking beer; wine and cider plant.

Preparation of distilled spirits apart from the actual distillation.

Non-fermented beverages and carbonated drinks, without alcohol.

Ethyl alcohol, other than by fermentation, see 09.1.

Class 28.11.

Delete the present definitions; insert—

Low pressure open filters for domestic use or small manufactures.

Oil strainers with or without filtering material.

Separation of fat or oil, see 36.6.

Class 28.3.

Delete the present definitions; insert—

Filtering materials and absorbents, and processes for reviving them.

Compound filtering surfaces, supports, attachments and packings, whether in fixed or moving apparatus.

Filtering processes not using special plant; decolorizing and like physical absorption processes, apart from special filters and special material.

Recovery of precious metals by carbon, see 14.5.

Chemical precipitation, see 83.1, 86.7, *and Group* 14.

Class 28.6.

Delete—

Liquid fuel treatment, see 20.6.

Insert—

Cracking oils, see 20.6.

Class 28.8.

Electro-osmosis, such as for separation of liquid from suspended solid.

Electrical settlement of suspensions from gases, see 17.4, 21.5, 90.9.

Class 30.1.

Insert "*Other*"—reference to read—

Other hand tools for horticulture, see 31.4.

Scraping hoes, see 31.4.

NOTICES—*continued.*

Supplement to Classification and Word Index—*continued.*

Class 30.4.

Delete the present definitions; insert—

Frame and operative details for these purposes applicable to implements of Groups 30 and 31, including—

- Regulating the width of furrow or depth of cut.
- Steering gear.
- Draught gear.
- Wheel mounting and adjusting not elsewhere specified.
- Lifting and lowering gear for frames not elsewhere specified.
- Other frame details, including fore and rear carriages and special frame gear for cultivating under foliage.
- Motor plough combinations apart from propulsion.

Delete—

Traction engines and motor driving, combinations, see Group 95.

Insert—

Traction engines and motor propulsion, see Group 95.

Class 32.3.

Delete the present definitions; insert—

General design of strippers.
General design of stripper harvesters.
General design of reaper thrashers.
General design of motor harvester combinations apart from special harvesting machines or propulsion.
Push-draught combinations apart from special harvesting machines.
Draught gear.
Steering gear.
Driving gear for operative parts apart from propulsion.
Harvester combinations or details not elsewhere specified.

Class 36.9.

Delete the present definitions; insert—

Complete processes for the manufacture of cheese.
Coagulating.
Collecting, stirring and breaking.
Cheese presses.
Maturing and preserving cheese.
Cheese cutters.
Preparation of edible albumenoid products.
Preparation of casein.

Rennet extract, see 09.9.

NOTICES—*continued.*

Supplement to Classification and Word Index—*continued,*

Class 57.5.

Delete—

Machines for closing, by applying capsules &c., for bottles and jars.

Insert—

Machines for closing bottles, jars, tins and cans by applying capsules.

Class 57.7.

Delete the present definitions; insert—

Unattached fluid-tight doors secured by cross levers with screws.

Unattached fluid-tight doors secured by cross levers with cams or wedges.

Fluid-tight doors with alternate action for lock chambers.

Hinged, sliding, or rotary fluid-tight doors (without alternate action for lock chambers).

Fluid-tight doors, not elsewhere specified, secured by bolts, screws, cams or wedges.

Class 65.1.

Delete the present definitions; insert—

Hydraulic motors for presses, hoists or other purposes.

Cylinders and pistons.

Frame and motor valve combinations for detached reciprocations.

Construction of special valves or joints.

Anti-concussion valves; preventing water hammer effects.

Cup and hat-leather packings; metallic or compound packing glands for excessive pressures.

Class 71.3.

Delete—

Nut forging machines.

Insert—

Nut and bolt-head forging by pressure.

Class 75.2.

Delete—

Knife cleaning and sharpening boards; oilstones, whetstones, strops.

Insert—

Knife cleaning; oil stones, whetstones, strops, and sharpening devices not elsewhere specified.

Sandpapering machines.

NOTICES—*continued.*

Supplement to Classification and Word Index—*continued.*

Class 89.9.

Delete—
Tamping and miners' fuses; fuse-pliers and like tools.
Insert—
Tamping and tamping tools.
Miners' fuses; fuse pliers and like tools.

Class 90.7.

Delete—
Safety and stopping devices; automatic stroke adjustment.
Starting devices against wrecking in gales.
Insert—
Starting and stopping devices; automatic stroke adjustment.
Safety devices against wrecking in gales.

Class 92.1.

Delete—
Mountings and fittings for ships' compasses.
Insert—
Mountings, fittings and synchronizing arrangements for ships' compasses.

Word Index.

Bolts—	
forging	*add* 71.3
Coal (*delete* boxes domestic, 20.2)	
Grease—	
extraction	*add* 36.6
Oil—	
cracking	20.6
strainers	28.11
Ploughs—	
Delete—	
automobile combinations	30.4
Insert—	
motor combinations	30.4
Delete—	
Rennet	36.9
Insert—	
Rennet extract	09.9

Retorts (*delete* coal, wood, gas, 21.1 ; coke, 20.2)	
Spirits—	
Insert—	
wood	21.1
Strainers—	
Insert—	
oil	28.11
Stoves—	
Delete—	
artisan's portable	24.2
Insert—	
soldering	73.6
Synchronizing—	
Insert—	
compasses	92.1

COMMONWEALTH.

PROCEEDINGS UNDER THE "PATENTS ACT 1903-1909."

List of Applications for Letters Patent received from 15th to 21st July, 1920.

The abbreviations "Prov." and "Comp." after the numbers indicate respectively that a Provisional or Complete Specification was lodged with the Application.

Thursday, 15th July.

16,656. *Prov.* Harold KINGDON-ROWE and Sydney SAUNDERSON—

"Electric device adaptable for use as a fuse, ceiling-rose or wall plug."

16,657. *Prov.* Arthur Walter PEDERSEN—

"Glass cloth sand belt."

16,658. *Prov.* Sydney Charles HANCOCK, *assignee of* Hampden Leopold MENCE, *act. inv.*—

"Method of and means for producing luminous signs, characters, figures and the like."

16,659. *Prov.* George Victor HAYSEY—

"Improvements in and relating to valves of engines, pumps and the like, and timing of same."

16,660. Gianni CAPRONI.

[Date applied for under International or Intercolonial Arrangements, 16th May, 1916, being date of application in Italy.]

"Improvements in aeroplanes."

16,661. *Comp.* Robert WILD—

"An improved bushing for use with wooden pulleys."

16,662. Arthur John ADAMS.

[Date applied for under International or Intercolonial Arrangements, 12th Jan., 1920, being date of application in Great Britain, No. 1003/*20*.]

"Improvements in or relating to trip mechanism for electric ignition devices for internal combustion engines."

16,663. (Captain) Walter BROADBRIDGE, Edwin EDSER, and MINERALS SEPARATION LIMITED.

[Date applied for under International or Intercolonial Arrangements, 18th July, 1919, being date of application in Great Britain, No. 18,038/*19*.]

"Improvements in and relating to the treatment of emulsions and the like."

16,664. *Prov.* Sidney James HUNNINGS—

"Device for raising and lowering vehicles."

16,665. *Prov.* Sidney James HUNNINGS—

"Non-skidding device for motor vehicles."

16,666. *Prov.* Sidney James HUNNINGS—

"Improvements in and relating to wheeled scoops."

16,667. *Prov.* Sidney James HUNNINGS—

"Improvements in and relating to wheeled scoops."

16,668. Arthur Petrie FLORENCE.

[Date applied for under International or Intercolonial Arrangements, 17th May, 1916, being date of application in Great Britain, No. 106,326.]

"Improvements in gas or like cookers."

16,669. Walter Douglas LAMONT.

[Date applied for under International or Intercolonial Arrangements, 28th Dec., 1918, being date of application in United States of America, No. 268,651/*18*.]

"Improvements in and relating to steam generators."

Applications received, 15th to 21st July—*continued.*

16,670. SOCIÉTÉ D'EXPLOITATION DE LA FERMETURE "LE SPHINX" SYSTEME REMY, *assignee of* Emile REMY, *act. inv.*

[Date applied for under International or Intercolonial Arrangements, 17th Jan., 1914, being date of application in France.]

"Improvements in safety mechanism for locks and the like."

16,671. *Comp.* William Beach PRATT—

"Sulphur-terpene compounds."

16,672. *Comp.* William Beach PRATT—

"Waterproofed fabric."

16,673. *Comp.* William Beach PRATT—

"Vulcanized articles and process of producing the same."

16,674. *Comp.* William Beach PRATT—

"Pneumatic tires."

16,675. *Comp.* William Beach PRATT—

"Solid tires."

16,676. Andrew Johnson NEAFIE.

[Date applied for under International or Intercolonial Arrangements, 7th Nov., 1914, being date of application in United States of America, No. 1,169,990.]

"Improvements in and relating to track-spray apparatus."

16,677. *Comp.* TATSUZO KOSUGI—

"An improved metal alloy."

16,678. *Comp.* ORE ROASTING DEVELOPMENT COMPANY, *assignee of* Carl Schott FOGH, *act. inv.*—

"Process of treating ores and apparatus therefor."

16,679. *Comp.* Charles Lancaster MARSHALL—

"Improvements in and relating to vulcanizing processes and apparatus for the manufacture of high pressure expanded vulcanized rubber and like substances."

16,680. Nora Constance Beaumont THOMAS, Henry Robert William ANDERSON, and Lionel Beaumont THOMAS (executors of the estate of Richard Beaumont THOMAS, deceased), Hubert Spence THOMAS, and William Robert DAVIES.

[Date applied for under International or Intercolonial Arrangements, 9th Dec., 1913, being date of application in Great Britain, No. 28,450.]

"Improvements in the manufacture of tin and terne plates and other like metal coated plates or sheets and in the machinery or apparatus employed in the said manufacture."

16,681. Nora Constance Beaumont THOMAS, Henry Robert William ANDERSON, and Lionel Beaumont THOMAS (executors of the estate of Richard Beaumont THOMAS, deceased), Hubert Spence THOMAS, and William Robert DAVIES.

[Date applied for under International or Intercolonial Arrangements, 7th Sept., 1916, being date of application in Great Britain, No. 109,302.]

"Improvements in machinery or apparatus employed in the manufacture of tinplates and sheets and other like metal coated plates or sheets."

16,682. Richard Walter GREGORY and ELECTRICAL IMPROVEMENTS LIMITED.

[Date applied for under International or Intercolonial Arrangements, 22nd Feb., 1917, being date of application in Great Britain, No. 111,766.]

"Improvements in or connected with oil break electric switches."

16,683. Alexander MACLENNAN.

[Date applied for under International or Intercolonial Arrangements, 29th Aug., 1919, being date of application in Great Britain, No. 11,993/*19*.]

"Improvements relating to vapour burners."

16,684. *Comp.* Hans Edvard KJÖLSETH—

"Improvements in sliding doors, drawers and the like"

16,685. *Comp.* Harold Vivian MARKS—

"Improvements in wire stock creels for wire netting weaving machines."

Applications received, 15th to 21st July—*continued.*

16,686. *Comp.* William Henry BEADLE—
"An improved bed rail fastener."

Friday, 16th July.

16,687. *Prov.* James Malachi FLANNERY—
"Break of gauge."

16,688. *Comp.* Orlando Elwood KELLUM—
"Method of and apparatus for producing synchronous kinetograph and phonograph records."

16,689. L. A. SHEEHAN and T. A. SHEEHAN—
"Milking machine."

16,690. *Prov.* William Thomas DAYTON—
"Tidal electric generator."

16,691. *Comp.* MCQUAY-NORRIS MANUFACTURING COMPANY, *assignee of* Arden John MUMMERT, *act. inv.*—
"Improvements in piston-head packing rings."

16,692. *Comp.* THE CONKLIN PEN MANUFACTURING COMPANY, *assignee of* Harry Penton FAIRCHILD, *act. inv.*—
"Magazine pencils."

16,693. James ROBINSON.

[Date applied for under International or Intercolonial Arrangements, 18th Aug., 1919, being date of application in Great Britain, No. 20,288/*19*.]

"Improvements in or relating to wireless reception apparatus."

16,694. *Comp.* MARCONI'S WIRELESS TELEGRAPH COMPANY, LIMITED, *assignee of* Ernest Edward FRANKIS, *act. inv.*—
"Improvements in receivers of wireless signals."

16,695. *Prov.* Joseph Leslie GILLON and George Henry HURST—
"Concrete mixer and elevator combined."

16,696. *Comp.* Edward Peter JOHNSON—
"Mechanical movement."

16,697. *Comp.* John K. SEYMOUR—
"Improvements in and relating to garment supports."

16,698. *Comp.* Howard Thomas Ryton DRAY—
"New or improved anchoring means."

16,699. The Hon. Sir Charles Algernon PARSONS, K.C.B., Stanley Smith COOK, and Louis Mortimer DOUGLAS.

[Date applied for under International or Intercolonial Arrangements, 7th July, 1919, being date of application in Great Britain, No. 16,972/*19*.]

"An improved turbine blade attachment."

16,700. Alexander REISSER.

[Date applied for under International or Intercolonial Arrangements, 21st Aug., 1913, being date of application in Austria, No. A.7205/*13*.]

"Calculating-machine."

16,701. *Comp.* Cecil Woods LE PLASTRIER, *communicatee of* GOODYEAR TIRE AND RUBBER COMPANY, *assignee of* William G. O'BRIEN, *act. inv.*—
"Improvements relating to the art of compounding rubber products."

16,702. *Comp.* Cecil Woods LE PLASTRIER, *communicatee of* GOODYEAR TIRE AND RUBBER COMPANY, *assignee of* Clayton Wing BEDFORD and Robert Luther SIBLEY, *act invs.*—
"Improvements relating to the art of vulcanizing rubber."

16,703. *Comp.* Cecil Woods LE PLASTRIER, *communicatee of* GOODYEAR TIRE AND RUBBER COMPANY, *assignee of* Clayton Wing BEDFORD and Robert Luther SIBLEY, *act. invs.*—
"Improvements relating to the art of vulcanizing rubber."

16,704. *Comp.* Cecil Woods LE PLASTRIER, *communicatee of* GOODYEAR TIRE AND RUBBER COMPANY, *assignee of* Clayton Olive NORTH, *act. inv.*—
"Improvements relating to the art of compounding vulcanized rubber products."

16,705. Robert Clifford HARTONG.

[Date applied for under International or Intercolonial Arrangements, 30th Mar., 1917, being date of application in the United States of America, No. 1,301,693.]

"Improvements relating to the art of compounding and vulcanizing rubber."

Applications received, 15th to 21st July—*continued.*

16,706. Clayton Wing BEDFORD.

[Date applied for under International or Intercolonial Arrangements, 29th May, 1917, being date of application in United States of America, No. 1,323,951.]

"Improvements relating to the art of preparing caoutchouc substances and vulcanized products therefrom."

16,707. Robert Clifford HARTONG.

[Date applied for under International or Intercolonial Arrangements, 25th Oct., 1918, being date of application in United States of America, Serial No., 259,690/*18*.]

"Improvements relating to the compounding of rubber products."

16,708. *Comp.* Harry G. NORWOOD—

"Improvements in wrenches."

16,709. *Comp.* Walter Edwin TRENT—

"Improvements in connection with the continuous production of power by combustion."

16,710. Robert ALLEN.

[Date applied for under International or Intercolonial Arrangements, 21st Mar., 1918, being date of application in Great Britain, No. 124,285.]

"An improved appliance for inserting piston rings or the like in their grooves or removing them therefrom."

Saturday, 17th July.

16,711. John Henry MACARTNEY and Jack MACARTNEY.

[Date applied for under International or Intercolonial Arrangements, 10th Jan., 1917, being date of application in United States of America, No. 141,689.]

"Improved centrifugal attritional pulverizer."

16,712. *Prov.* Harry EDWARDS—

"Automatic advertising projectorscope."

16,713. Frederick BOLTON.

[Date applied for under International or Intercolonial Arrangements, 28th Mar., 1918, being date of application in Great Britain, No. 5512/*18*.]

"Improvements connected with reinforced concrete floors, roofs, landings, beams and the like."

16,714. Frederick BOLTON.

[Date applied for under International or Intercolonial Arrangements, 29th May, 1919, being date of application in Great Britain.]

"Improvements connected with reinforced concrete floors, roofs, landings, beams and the like."

16,715. Theodor SCHMIEDEL.

[Date applied for under International or Intercolonial Arrangements, 11th Aug., 1919, being date of application in Germany.]

"Device for bringing gases or vapours and liquids into intimate contact."

16,716. Theodor SCHMIEDEL and Hans KLENCKE.

[Date applied for under International or Intercolonial Arrangements, 8th Aug., 1919, being date of application in Germany, No. 55,873.]

"Process for the production of sulphuric acid without chambers and towers."

16,717. *Prov.* James Victor FREEMAN—

"Improvements in dough moulding machines."

16,718. *Prov.* Frederick LUKE—

"Improvements relating to the mounting of artificial teeth."

16,719. *Comp.* Heinrich HILDEBRAND—

"Improvements in motor cycles."

16,720. Kenneth GAULDIE.

[Date applied or under International or Intercolonial Arrangements, 18th July, 1919, being date of application in Great Britain, No. 17,962/*19*.]

"Improvements in apparatus for measuring forces and the like."

16,721. Isaac Newton LEWIS.

[Date applied for under International or Intercolonial Arrangements, 23rd Nov., 1918, being date of application in United States of America, No. 263,823/*18*.]

"Improvements in automatic guns."

Applications received, 15th to 21st July—*continued.*

16,722. Isaac Newton LEWIS.

[Date applied for under International or Intercolonial Arrangements, 23rd Nov., 1918, being date of application in United States of America, No. 263,824/*18.*]

"Improvements relating to automatic guns."

16,723. Isaac Newton LEWIS.

[Date applied for under International or Intercolonial Arrangements, 16th Jan., 1919, being date of application in Great Britain, No. 1177/*19.*]

"Improvements relating to trigger mechanism for firearms."

16,724. Isaac Newton LEWIS.

[Date applied for under International or Intercolonial Arrangements, 16th Jan., 1919, being date of application in Great Britain, No. 1178/*19.*]

"Improvements relating to cartridge magazines for firearms."

Monday, 19th July.

16,725. *Prov.* Hugh Barn MULHOLLAND—

"Improvements in collars."

16,726. *Prov.* William Meade REYNOLDS—

"Improvements in toilet cabinets."

16,727. *Prov.* Arthur BAILLIE, William Dent OSWALD, and Thomas Edward Reginald SADLIER—

"Boiler disincrustant and radiator fluid."

16,728. *Prov.* Douglas Henry STOKES—

"Improvements in air strainers for air brakes."

16,729. *Comp.* Henry MEISTER—

"Improvements in handles for frying pans and like stamped sheet metal utensils."

16,730. *Prov.* James Andrew DUTHIE—

"Side-skid preventer attachment for automobiles."

16,731. *Prov.* John Arthur CRESSWICK—

"Manufacture of salt from sea water by the use of waste heat of furnace slag."

16,732. *Prov.* William John CRUTCHER—

"An improved method (by use of specially grooved batten, wire and seal) for battening wiring and sealing of case, cases, box, boxes, and such like container or containers of goods, merchandise or property for better prevention and mitigation of pillages."

16,733. *Prov.* George McGLASHAN—

"Perforator cancelling machine."

16,734. *Prov.* Francis Robert JOHNSON—

"Improvements in and relating to electric circuit breakers."

16,735. PETRA AKTIEN-GESELLSCHAFT FÜR ELEKTROMECHANIK.

[Date applied for under International or Intercolonial Arrangements, 3rd June, 1919, being date of application in Germany, Serial No. P. 37,886.]

"An improved cabinet for the projection of kinematograph films."

16,736. PETRA AKTIEN-GESELLSCHAFT FÜR ELEKTROMECHANIK.

[Date applied for under International or Intercolonial Arrangements, 11th June, 1919, being date of application in Germany, Serial No. P.37,913.]

"Automatic safety device for kinematograph apparatus."

16,737. PETRA AKTIEN-GESELLSCHAFT FÜR ELEKTROMECHANIK.

[Date applied for under International or Intercolonial Arrangements, 14th July, 1919, being date of application in Germany, Serial No. P.31,431.]

"Improved arrangement for the optical projection of pictures."

16,738. ELEKTRO-OSMOSE AKTIENGESELLSCHAFT (GRAF SCHWERIN GESELLSCHAFT).

[Date applied for under International or Intercolonial Arrangements, 30th Nov., 1918, being date of application in Germany, Serial No. E.23,597.]

"An improved process for tanning or impregnating materials."

Applications received, 15th to 21st July—*continued.*

16,739. *Comp.* Paul DE MILES—

"A new alloy."

16,740. *Comp.* Paul DE MILES—

"Improvements relating to electric furnace."

16,741. *Comp.* Dr. Arthur HAEBERLIN—

"Loin-cloth holder."

16,742. *Prov.* George EMERSON—

"Improvements in tool holders."

16,743. *Prov.* Amy May THOMAS—

"Improvements in corsets."

16,744. *Comp.* Elias LJUNGQUIST, *assignee of* Gustaf Alarik NYQUIST, *act. inv.*—

"Improvements in or relating to stiffening insertions for the toe-caps or counters of boots, shoes, and the like."

16,745. *Prov.* James Irvine WOODWARD—

"An apparatus by which motive power can be obtained from the sea."

16,746. *Prov.* Henry Edwin McDONALD—

"An improved safety carrier for parcels and the like."

16,747. *Prov.* Henry Edwin McDONALD—

"An improved safety button for garments and the like."

16,748. Louis John STEELE, Harold MARTIN, and Andrew Edward McCARTHY.

[Date applied for under International or Intercolonial Arrangements, 27th June, 1919, being date of application in Great Britain, No. 16,232/*19.*]

"Improvements in or relating to electric welding."

16,749. *Comp.* George William MASCORD—

"Improvements relating to printing machines."

16,750. *Comp.* George William MASCORD—

"Improvements in rotary printing machines."

16,751. *Comp.* Theodore STRETTON and John William JONES—

"Improvements relating to miners' safety lamps."

16,752. *Comp.* Theodore STRETTON—

"Improvements relating to miners' safety lamps."

16,753. Robert McKee MARTIN.

[Date applied for under International or Intercolonial Arrangements, 14th Jan., 1919, being date of application in Great Britain, No. 126,260.]

"Improvements relating to hemmed goods."

16,754. *Prov.* William James ALLAN—

"Improvements in and relating to the manufacture of whisks and like brooms."

16,755. Max Israel KOPKIN.

[Date applied for under International or Intercolonial Arrangements, 9th Dec., 1918, being date of application in Great Britain, No. 125,568.]

"Improvements in and relating to hand and other bags."

Tuesday, 20th July.

16,756. Lewis Bailey SKINNER.

[Date applied for under International or Intercolonial Arrangements, 11th Feb., 1918, being date of application in United States of America, Serial No. 216,503/*18.*]

"Methods of protecting metallic conduits exposed to high temperatures, and apparatus embodying metallic conduits so protected."

16,757. Lewis Bailey SKINNER.

[Date applied for under International or Intercolonial Arrangements, 11th Feb., 1918, being date of application in United States of America, Serial No. 216,594/*18.*]

"Processes of smelting ore."

16,758. Lewis Bailey SKINNER.

[Date applied for under International or Intercolonial Arrangements, 10th Feb., 1919, being date of application in United States of America, No. 276,126/*19.*]

"Heat regenerator."

Applications received, 15th to 21st July—*continued.*

16,759. *Comp.* Olaf Ludvig HOWE—

"Improvements in air motors."

16,760. *Prov.* George Phillip CARROLL—

"An improved filter or strainer for painters' blow-lamps and the like."

16,761. *Prov.* Arthur Percival SPENCE and Charles REID—

"A permanent clothes peg."

16,762. *Prov.* Henry AUHL—

"A blend of mustard."

16,763. *Comp.* Fernand RADELET and Edmond BONNET—

"Improvements in or relating to spikes and screws for rails."

16,764. *Comp.* SOCIÉTÉ LE COKE INDUSTRIEL, *assignee of* Frank LIOUD, *act. inv.*—

"Improvements in apparatus for the separation of coke or carbon from slag or the like."

16,765. Ernest William EDWARDS.

[Date applied for under International or Intercolonial Arrangements, 1st Aug., 1919, being date of application in Great Britain, No. 19,107/*19*.]

"An improved body for a motor car or other motor or railway vehicle."

16,766. *Comp.* Nate MOCK—

"Improvements in or relating to stamp inking pads."

16,767. *Prov.* Anthony George Maldon MICHELL—

"An automatic valve for air-compressors and pumps and like machines."

16,768. Dr. Hermann MEHNER.

[Date applied for under International or Intercolonial Arrangements, 26th Nov., 1914, being date of application in Germany.]

"Valveless pump for molten materials."

16,769. Dr. Hermann MEHNER.

[Date applied for under International or Intercolonial Arrangements, 9th Oct., 1914, being date of application in Germany.]

"Process for the manufacture of cyanogen compounds."

C.12057.—2

16,770. *Prov.* Hazen COOK, Hazen James Townsend COOK, and Francis Philip USHER—

"Improvements in knocking up mechanism for printing machines."

16,771. Albert Douglas SMITH.

[Date applied for under International or Intercolonial Arrangements, 27th Dec., 1915, being date of application in United States of America, No. 68,789/*15*.]

"Improvements in or relating to sewing machines."

16,772. Ralph MAYHEW.

[Date applied for under International or Intercolonial Arrangements, 10th June, 1916, being date of application in United States of America, No. 1,236,333.]

"Improvements in books or the like."

16,773. Harry Franklin PERKINS.

[Date applied for under International or Intercolonial Arrangements, 2nd July, 1919, being date of application in United States of America, No. 308,145/*19*.]

"Improvements in and relating to the separation of liquids."

16,774. Wilson HOUSMAN.

[Date applied for under International or Intercolonial Arrangements, 26th Nov., 1917, being date of application in United States of America, Serial No. 204,048/*17*.]

"Improvements in spark plugs."

16,775. Warren Gilman JONES.

[Date applied for under International or Intercolonial Arrangements, 9th Sept., 1918, being date of application in United States of America, No. 253,274/*18*.]

"Improvements in speed-reducing mechanism."

16,776. Eugéne Marié Georges LEPÉRE.

[Date applied for under International or Intercolonial Arrangements, 23rd Dec., 1918, being date of application in United States of America, No. 268,042/*18*.]

"Improvements in liquid-supplying systems."

Applications received, 15th to 21st July—*continued.*

Wednesday, 21st July.

16,777. *Comp.* Arthur Roy SMITH—

"Improvements in and relating to airplanes."

16,778. *Comp.* Edward Plunket TAYLOR—

"Electric toaster."

16,779. Lucien Paul BASSET.

[Date applied for under International or Intercolonial Arrangements, 10th Mar., 1919, being date of application in France.]

"Process for the production of metals or metalloids, their alloys and combinations."

16,780. Johann Heinrich Hermann VOSS.

[Date applied for under International or Intercolonial Arrangements, 11th Dec., 1917, being date of application in United States of America, No. 1,287,530.]

"Valves."

16,781. Michael RIESNER.

[Date applied for under International or Intercolonial Arrangements, 26th Dec., 1914, being date of application in United States of America, Serial No. 879,117/*14*.]

"Automatic plate valves."

16,782. *Comp.* DUNLOP RUBBER COMPANY OF AUSTRALASIA LIMITED, *assignee of* Frank Osborne WOLFF, *act. inv.*—

"An improved closure device for containers for vaporisable liquid such as benzine or the like."

16,783. *Prov.* Robert Edward PLUMMER—

"An improved tool for emasculating and tailing lambs."

16,784. *Prov.* GLORIA LIGHT COMPANY OF AUSTRALASIA—

"An improved heating device for linotype printing machines and the like."

16,785. Ernest Henry SCHMIDT.

[Date applied for under International or Intercolonial Arrangements, 2nd Feb., 1915, being date of application in United States of America, No. 1,228,830.]

"Improvements in and relating to shock absorbing mechanism."

16,786. Ernest Henry SCHMIDT.

[Date applied for under International or Intercolonial Arrangements, 30th Nov., 1915, being date of application in United States of America, No. 1,228,831.]

"Improvements in and relating to shock absorbing mechanism."

16,787. Ernest Henry SCHMIDT and Chester Kingsley BROOKS.

[Date applied for under International or Intercolonial Arrangements, 26th Apr., 1916, being date of application in United States of America, No. 1,301,809.]

"Improvements in and relating to shock absorbing mechanism."

16,788. Ernest Henry SCHMIDT.

[Date applied for under International or Intercolonial Arrangements, 8th Mar., 1917, being date of application in United States of America, No. 1,243,227.]

"Improvements in and relating to shock absorbing mechanism."

16,789. Ernest Henry SCHMIDT.

[Date applied for under International or Intercolonial Arrangements, 17th May, 1916, being date of application in United States of America, No. 1,301,878.]

"Improvements in and relating to shock absorbing mechanism."

16,790. Ernest Henry SCHMIDT.

[Date applied for under International or Intercolonial Arrangements, 8th July, 1919, being date of application in United States of America, No. 309,376/*19*.]

"Improvements in and relating to shock absorbing mechanism."

16,791. Max MASON.

[Date applied for under International or Intercolonial Arrangements, 25th June, 1919, being date of application in United States of America, Serial No. 322,217/*19*.]

"Improvements in and relating to apparatus for the determination of wave energy direction."

16,792. George Washington PIERCE.

[Date applied for under International or Intercolonial Arrangements, 25th June, 1919, being date of application in United States of America, Serial No. 322,225/*19*.]

"Improvements in and relating to electric compensators."

Applications received, 15th to 21st July—*continued.*

16,793. Harvey Cornelius HAYES.

[Date applied for under International or Intercolonial Arrangements, 25th June, 1919, being date of application in United States of America, Serial No. 322,223/*19*.]

"Improvements in method of sounding and determining distances."

16,794. Harvey Cornelius HAYES.

[Date applied for under International or Intercolonial Arrangements, 25th June, 1919, being date of application in United States of America, Serial No. 322,224/*19*.]

"Improvements in and relating to devices for detecting and determining the direction of sounds."

16,795. Harvey Cornelius HAYES and Max MASON.

[Date applied for under International or Intercolonial Arrangements, 25th June, 1919, being date of application in United States of America, Serial No. 322,221/*19*.]

"Improvements in method of and apparatus for directive sound transmission."

16,796. Harvey Cornelius HAYES.

[Date applied for under International or Intercolonial Arrangements, 25th June, 1919, being date of application in United States of America, Serial No. 322,222/*19*.]

"Improvements in and relating to apparatus for detecting and determining the direction of wave energy."

16,797. *Comp.* Wesley Wellington BLAIR—

"Improvements in methods of treating peat."

16,798. *Prov.* Charles Edmund Frank ROACH—

"Improvements in and relating to breakdown saw benches."

16,799. *Comp.* BOWERS CAN SEAL COMPANY, *assignee of* John Charles BOWERS, *act. inv.*—

"Improvements in hermetically sealed receptacle."

16,800. *Comp.* George Marques PETERS—

"Improvements in 'cushion wheel.'"

16,801. Charles FREGONARA.

[Date applied for under International or Intercolonial Arrangements, 2nd Aug., 1919, being date of application in France, No. 502,192.]

"Improvements in removable constructions."

16,802. *Comp.* George Albert BOYDEN, jun., and John Calvin BOYDEN—

"Railway car trucks."

16,803. George BERNERT.

[Date applied for under International or Intercolonial Arrangements, 4th Sept., 1917, being date of application in United States of America, Serial No. 189,463/*17*.]

"Improvements in conveyors."

16,804. George BERNERT and Jacob BERNERT.

[Date applied for under International or Intercolonial Arrangements, 11th Aug., 1915, being date of application in United States of America, Serial No. 44,945/*15*.]

"Improvements in conveyors."

16,805. Martin André ROSANOFF.

[Application under International or Intercolonial Arrangements.]

"Process and apparatus for fractionation."

16,806. AMERICAN SMELTING AND REFINING COMPANY.

[Date applied for under International or Intercolonial Arrangements, 9th Sept., 1918, being date of application in United States of America, Serial No. 253,157/*18*.]

"Improvements in and relating to a method for making sulphur from sulphur dioxide."

16,807. *Prov.* Charles William LAND—

"Improved display apparatus."

16,808. *Comp.* Ruben Christopher Miller HASTINGS—

"Telephonic call system."

16,809. *Comp.* Alonzo L. GIBBS—

"Art of refrigeration."

16,810. *Comp.* Victor Ray WILL—

"Direction signal for motor vehicles."

Applications received, 15th to 21st July—*continued.*

16,811. Eugene Cornelius SULLIVAN and William Chittenden TAYLOR.

[Date applied for under International or Intercolonial Arrangements, 26th Feb., 1917, being date of application in United States of America.]

"Glass compositions and articles made therefrom."

16,812. *Prov.* Alfred Charles WHITE—

"An improved fitting for light apertures in hooded vehicles."

16,813. *Prov.* Norman Daniel FERGUSON, *agent for* Phillip Alexander MACKAY, *act. inv.*—

"Improvements in the treatment of barium and strontium sulphates."

16,814. *Prov.* Norman Daniel FERGUSON, *agent for* Phillip Alexander MACKAY, *act. inv.*—

"An improved process for obtaining copper sulphate direct from metallic copper."

16,815. *Prov.* Norman Daniel FERGUSON, *agent for* Phillip Alexander MACKAY, *act. inv.*—

"Improvements in the manufacture of lead sulphate adapted for use as a pigment."

16,816. *Prov.* Frederick William JOHNSTONE—

"Compound usable for coating the tread surfaces of rubber tyres of road vehicles and for other purposes."

16,817. *Comp.* Octavius Charles BEALE—

"Improvements in material for covering the playing keys of pianos, organs, and such like musical instruments."

16,818. *Prov.* Richard DOBSON and William DIXON, *act. invs.*, and Walter Woodbine HEIRON, *assignee*—

"Improved method and device for skinning dead cattle and heavy animal carcases."

16,819. *Comp.* Clifford William WINTERBOTHAM—

"Electric iron."

16,820. *Comp.* William Iverach GIBSON—

"Internal combustion engine cylinders and water jackets."

Corrigenda.

1919.

In Vol. 30, No. 25, p. 652, under heading "Applications Received," for 11,613 and 11,614. JOHN I. THORNYCROFT & COMPANY LIMITED, &c., *read*—

11,613. JOHN I. THORNYCROFT & COMPANY LIMITED, Tom THORNYCROFT, and Sir John Edward THORNYCROFT.

[Date applied for under International or Intercolonial Arrangements, 11th June, 1917, being date of application in Great Britain, No. 128,237.]

"Improvements in or relating to means for launching torpedoes."

11,614. JOHN I. THORNYCROFT & COMPANY LIMITED, Tom THORNYCROFT, and Sir John Edward THORNYCROFT.

[Date applied for under International or Intercolonial Arrangements, 11th June, 1917, being date of application in Great Britain, No. 128,238.]

"Improvements in or relating to means for launching torpedoes."

◆

Provisional Specifications Accepted.

Names in parentheses indicate actual inventors, &c., who are not applicants. Italics indicate that some amendment has been made.

1919.

12,996. White, P. E. Altering feed in chaffcutters.

1920.

14,905. Campbell, A. N. Tin opener.
14,932. Millett, H. J. *Book marker.*
15,089. The British United Shoe Machinery Co. of Aust. Pty. Ltd., *assignee of William Christopher Baxter, act. inv* Splitting machine.
15,225. Jasper, R. C. Elevator carrier.
15,265. Getty, M. Shearing machine boring attachment.
15,359. Maddock, A. H., & Hookway, A. R. Bedstead fastener.
15,437. Monkhouse, W. I. Advertising signs.
15,681. Rodda, B. N. Seed drill.
15,765. de Cairos-Rego, G. Violin.
15,787. Dawson, J. G., & Hillsmith, R. J. Egg carrier.
15,793. Gebbie, J. N., & Walpole, J. Self-tying binder.
15 954. Trapp, W. P. Insect destruction.
16,111. Ricketts, J. C. Tyre protector.
16,119. Walker, A. Toy money box.
16 133. Cronin, F. B. Pneumatic tyre.
16,180. McCallum, J. W. Sketch production.
16,188. Barnes, F. G. Aerial railway.
16,190. Tierney, J. P. Bangle fastener.
16,270. Shearer, D. Sharpening agricultural shares.
16,281. Williams, W. Lifting jack.

* * *

Complete Specifications lodged after Provisional Specifications.

Complete Specifications under Section 63A have their Cognate Provisionals indicated in brackets. The date following the title is that on which the Complete Specification was lodged.

1919.

11,169. William Henry BOYD and Thomas Britton EVANS—

"Improved reaper thresher." 10th July, 1920.

12,487. Thomas Edward MOORHOUSE—

"Improvements in cameras applicable to aerial photography and negatives made thereby." 10th July, 1920.

12,509. Lawrence George WIENEKE—

"An improved machine for starting horse and other races." 10th July, 1920.

12,735. [13,629; 14,690/*20*; 15,308/*20*.] James Carlile WHITEMAN—

"Improvements in carburetion." 14th July, 1920.

12,931. Montague Herbert CHURCHILL-SHANN—

"Mechanical control of sails." 8th July, 1920.

12,999. Isaac JACOBS—

"Improvements in tap filter attachments." 14th July, 1920.

1920.

14,022. [16,135.] Alfred Carlyle DAY—

"Improvements in and relating to electrical switches and the like." 14th July, 1920.

15,730. [16,281.] William WILLIAMS—

"Improvements in lifting jacks." 13th July, 1920.

Application for Patent dated other than Date of Lodgment.

1920.

14,932. Millett, H. J.

[Application post-dated to 31st May, 1920.]

Applications with Provisional Specifications Lapsed, Abandoned, or Withdrawn.

Names in parentheses indicate actual inventors, &c., who are not applicants.

Lapsed.

1918

9565. Pioneer Spring Co. Ltd. (Lovell, G. A.)

1919.

12,508. Hill, W. R.
12,510. Zalocostas, D. G.
12,511. Long, T. F.
12,512. Sutherland, I.
12,513. Lochore, J. W.
12,514. Simcoe, G.
12,517. Nelson-Slee, H., & Buckley, R. A.
12,519. Tomlinson, R. A.
12,521. Massey, S., Overton, J. E., & Massey, W. H.
12,524. Moore, R.
12,529. Gordon, W. H.
12,530. Macdonald, S. L.
12,531. Muller, C. F. G. H.
12,535. Dalton, W. M.
12,537. Painter, W. F. W.
12,541. Fraser, J. S., & Sharman, T. S.
12,542. Francis, R., & Austin, J. H.
12,543. McKenna, F. N.
12,545. Birrell, T. F.
12,547. Warren, S.
12,550. Finkernagel, B.
12,551. Young, H.
12,552. Shennan, W. D.
12,553. Sim, W.
12,554. Coburn, C.
12,555. Morison, D. N., & Swain, T. J.
12,557. O'Donnell, M.
12,558. Curran, F. W., & Cork, S. V.
12,559. Jack, P. J., & Taylor, J.
12,561. Storey, W. J.

Applications with Complete Specifications (not open to Public Inspection) Lapsed, Refused, Abandoned, or Withdrawn.

Complete Specifications under Section 63A have their Cognate Provisionals indicated in brackets. Names in parentheses indicate actual inventors, &c., who are not applicants.

Lapsed.

1919.

10,754. Jones, T. P.
10,755. Jones, T. P.
10,769. Dyer, F. S.
10,780. Mottram, E. V. & A. A.

Amendment Made.

1918.

7984. 15 July. AMALGAMATED WIRELESS (AUSTRALASIA) LIMITED, of Wireless House, 97 Clarence-street, Sydney, New South Wales.

In pursuance of leave granted on 23rd April, 1920, the above-numbered specification has been amended in the manner set forth in Vol. 32, p. 354, of the *Official Journal*, dated 23rd March, 1920.

Specifications open to Public Inspection before Acceptance,

UNDER SECS. 121 AND 122, "PATENTS ACT 1903-1909."

The specifications may be inspected at the Patent Office, Melbourne, on payment of the search fee of One Shilling in respect of each Application.

Typed copies of specifications will be supplied at Sixpence per 100 words (minimum charge, One Shilling).

Sun prints of drawings will be supplied at One Shilling per foolscap folio sheet (8 inches x 13 inches).

Fees must be tendered in cash or postal note or in money order, payable to the Commissioner of Patents, Melbourne.

1919.

11,980. Harold Potter DONLE.

[Date applied for under International or Intercolonial Arrangements, 23rd Mar., 1918, being date of application in United States of America, No. 1,291,641; open to public inspection 8th July, 1920.]

"Improvements in electron valves."

12,577. Edgar Arthur ASHCROFT.

[Date applied for under International or Intercolonial Arrangements, 9th July, 1919, being date of application in Great Britain, No. 17,248/*19*; open to public inspection 10th July, 1920.]

"Improvements in the production of magnesium, or alloys of magnesium, and by-products."

13,032. The Honorable Sir Charles Algernon PARSONS, K.C.B., Alfred Quintin CARNEGIE, Matthew BONE, and Stanley Smith COOK.

[Date applied for under International or Intercolonial Arrangements, 16th Oct., 1918, being date of application in Great Britain, No. 16,910/*18*; open to public inspection 3rd Nov., 1919.]

"Improvements in the manufacture of blading for turbines."

Specifications open to Public Inspection before Acceptance—*continued.*

1920.

13,959. Frank Gottlob Breyer, Albert Ernest Hall, and George Randall Waltz.

[Date applied for under International or Intercolonial Arrangements, 12th July, 1919, being date of application in United States of America, Serial No. 310,440/*19*; open to public inspection 13th July, 1920.]

"Production of metal oxides and other compounds of metals."

15,020. Richard Amberton.

[Date applied for under International or Intercolonial Arrangements, 8th July, 1919, being date of application in Great Britain, No. 17,073/*19*; open to public inspection 9th July, 1919.]

"Improvements relating to electric circuit controllers."

16,056. Walter Edwin Trent.

[Date applied for under International or Intercolonial Arrangements, 9th July, 1919, being date of application in United States of America, Serial No. 309,642/*19*; open to public inspection 10th July, 1920.]

"Method of cleaning coal."

16,114. William John Nixon Mann.

[Date applied for under International or Intercolonial Arrangements, 12th July, 1919, being date of application in Great Britain, No. 17 527/*19*; open to public inspection 13th July, 1920.]

"Improvements in or relating to apparatus for washing crockery and other domestic utensils."

16,125. Aage Georg Peter Wiingaard.

[Date applied for under International or Intercolonial Arrangements, 14th June, 1919, being date of application in Denmark, No. 1661/*19*; open to public inspection 10th July, 1920.]

"Improvements in savings clocks."

16,154. Mark Anthony Replogle.

[Date applied for under International or Intercolonial Arrangements, 12th July, 1919, being date of application in United States of America, Serial No. 310,347/*19*; open to public inspection, 13th July, 1920.]

"Method of and apparatus for treating selvage of woven fabric."

16,417. Albert Wallace Hull.

[Date applied for under International or Intercolonial Arrangements, 5th July, 1919, being date of application in United States of America; open to public inspection 6th July, 1920.]

"Electron discharge."

16,458. William Comings White.

[Date applied for under International or Intercolonial Arrangements, 8th July, 1919, being date of application in the United States of America; open to public inspection 9th July, 1920.]

"Amplifying current."

* * *

Complete Specifications Accepted.

OPEN TO PUBLIC INSPECTION AT THE PATENT OFFICE, MELBOURNE.

SEARCH OR INSPECTION FEE—ONE SHILLING EACH.

Notice is hereby given that all persons interested in opposing the grant of a Patent on any one of the following applications, may at any time within three months from the date of this Journal, or within such further time not exceeding one month as may on application made within such three months be allowed, give notice at the Patent Office, in Form G, which must be accompanied by the fee of £2, tendered in cash or postal note or in money order.

Within fourteen days after the lodging of the notice of opposition, or within such further time as the Commissioner allows, the opponent shall leave at the Patent Office declarations and copies thereof in support of his opposition, and forthwith after the receipt thereof the copies shall be transmitted by the Commissioner to the applicant.

Failure by an opponent to lodge declarations shall be deemed intentional abandonment of the opposition.

1918.

9158. Constantinesco. Speedometer.
9448. Motala Verkstads Nya Aktiebolag, *assignee of Karl Hjalmar Vilhelm von Porat, act. inv.* Feeding pulverized fuel.

1919.

10,544. Thorp. Curtain wardrobe.
10,614. Hodgkins. Stuffing-box.
10,753. Olliffe. Telephone mouthpiece.
10,975. Conradi. Reinforced concrete pipes.
11,359. Davis. Labelling machine.
11,380. U.S. Industrial Alcohol Co. (Backhaus). Liquid fuel.
11,649. Phil-Har-Chee Piano Player Corp. (Cheek). Pressure-controlled pump for pneumatic players.
11,794. McCrudden. Machine gun.
11,867. Murphy. Bath screen.
11,943. Maxwell. Secateur.
11,961. Hughes. Trench knife.
12,030. Wigginton. Loose sheet support.
12,125. Waters (Fallwell). Concrete block moulding machine.
12,275. Ryan. Boot fastener.
12,328. Hill. Concrete building block.
12,448. Clarke. *An improved surface treating or polishing device.*
12,500. Bebarfalds Ltd. (Chambers). Drophead sewing machine.
12,666. Johnson. Bag holder.
12,835. Alston. Windmill head gear.
12,836. Burri. Magneto electric lamp.
13,053. Waters (Westinghouse Air Brake Co., *assignee of Harry Frank Woernley, act. inv.*). Automatic electric coupler.
13,138. Metzger. Spike extractor.
13,178. The Betan Co. (Merritt). Radiator.
13,484. Oddy. Balancing propeller blades.
13,533. Washburn. *Acetylene burners.*
13,550. Stark (Flammang). Process of making pistons.
13,583. Thacher Propeller and Foundry Corp. (Thacher). Casting screw propellers.
13,618. McKenzie, Holland & Westinghouse Power Signal Co. Ltd. & Hornblower. Railway signalling system.
13,661. Hallett. Plate machine.
13,744. Degory. Carburettor.
13,815. Humphris. Adjustable spanner.
13,826. Burke. Meat cutting machine.
13,843. Clifford. Flexible shaft coupling.
13,847. Siemens Brothers and Co. Ltd., & Pettigrew. Private branch exchange system.

1920.

13,951. Essex Motors (Fekete). Cooling internal combustion engines.
13,958. Singmaster, Breyer, & Hall. Production of metallic oxides and sulphate.
14,130. Southey Gas Producers Ltd. (Thomas). Vaporizer.
14,178. Snow. Collapsible gate.
14,215. Aktiebolaget Svenska Kullagerfabriken (Palmgren). Roller bearing.
14,291. Doane. Cheese making.
14,301. Pulverman. Tyre valve and gauge.
14,335. Gay & Gay. Cup handle.
14,415. Arato. Steering gear for trailers.
14,499. Hellen. Vehicle wheel.

NOTE.—THE SURNAMES IN PARENTHESES INDICATE ACTUAL INVENTORS (OR OTHER INTERESTED PARTIES) WHO ARE NOT APPLICANTS. ITALICS INDICATE THAT SOME AMENDMENT HAS BEEN MADE.

Complete Specifications Accepted—*continued.*

Further information of the inventions in the above Specifications is given in the following Illustrated Notes, and the full particulars of names, addresses, and occupation or calling of persons concerned in each application are stated in the Printed Specifications.

Printed copies of the above Specifications may now be ordered from the Government Printer, Melbourne, price One Shilling each, post free for cash or postal note; the copies will be posted from Melbourne two weeks after the date of this Journal, when copies will also be forwarded to the Trade Marks Sub-offices, at the Commonwealth Bank Buildings, Sydney, and at the Customs Houses, Brisbane, Adelaide, Perth, and Hobart, for sale on demand.

A list of Australian and Foreign Offices and Libraries at which the Printed Specifications are placed for free public inspection is given in the first Journal of each quarter.

Illustrated Notes

TO THE FOREGOING ACCEPTED COMPLETE SPECIFICATIONS.

The class numbers refer to similar inventions comprised in the Classified Subject Matter Indexes.

1918.

9158. 31 Oct. G. CONSTANTINESCO, England.

Date applied for under International or Intercolonial Arrangements, 30th January, 1918, Great Britain, No. 1761/*18*.

Class 56.6.

Speedometer.

A speed indicator in which rotation of a shaft imparts movement by centrifugal action to a body of fluid within which is immersed a Pitot tube connected with a pressure gauge.

The rotor **b** containing fluid is driven by a pulley **p** or is mounted directly on the shaft to be tested. The ends **g** of the Pitot tube project into the outer portion of the rotor and are connected by passages **h** and **i** with pipes **m** and **n** leading to a differential gauge. When rotation is imparted to the pulley **p** the fluid, preferably paraffin, within the ring attains the velocity of the rotor walls, and a pressure difference is shown on the gauge from which the speed of the shaft may be calculated.

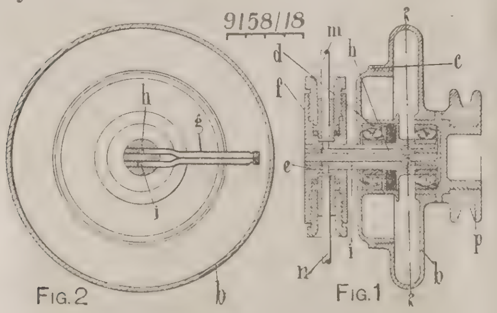


FIG. 2 FIG. 1

5 figures, 3 claims.

9448. 4 Dec. MOTALA VERKSTADS NYA AKTIEBOLAG, *assignee of* Karl Hjalmar Wilhelm VON PORAT, *act. inv.*, Sweden.

Date applied for under International or Intercolonial Arrangements, 6th December, 1917, Sweden, No. 4021/*17*.

Class 63.5.

Feeding Pulverized Fuel.

A feeding arrangement for pulverized fuel, in which air is forced through holes 6 in a pipe 1, and carries the fuel upwards through a conduit 2 to the furnace, the supply of air being regulated by the simultaneous operation of the slide 61 and valve 65.

In modifications, the feed is regulated by radial or axial adjustment of the conduit 2 relative to the pipe 1.

Further modifications provide for regulating the air by means of a perforated sleeve adjustable by movement of the conduit pipe or suitable levers, or by a spring retained piston which is automatically operated on opening the air supply.

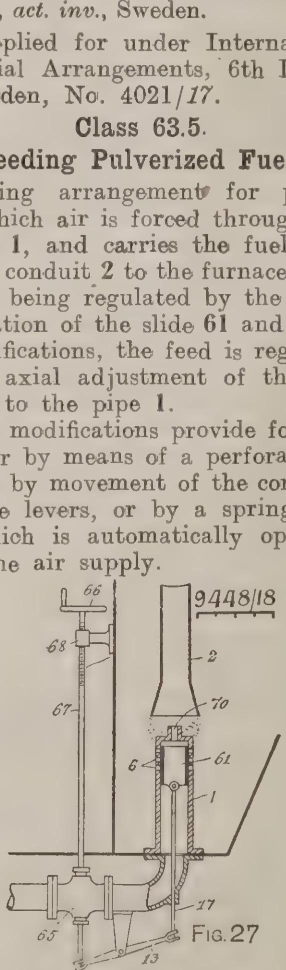


FIG. 27

27 figures, 10 claims.

Illustrated Notes—*continued.*

1919.

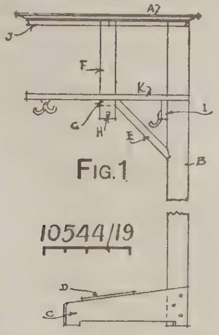
10,544. 26 Mar. G. A. Thorp, N.S.W.

Class 45.4.

Curtain Wardrobe.

A portable wardrobe, consisting of a pole **B** supported on two feet **C**, has a circular top **A** from which is suspended side pieces **F** supporting a shelf **K** and a hook rod **H**; the shelf **K** is also supported by the hook rail **I**.

A shelf **D** is provided on the feet **C** and curtains are hung on the hoop **J**.



3 figures, 2 claims.

10,614. 29 Mar. A. Hodgkins, N.S.W.

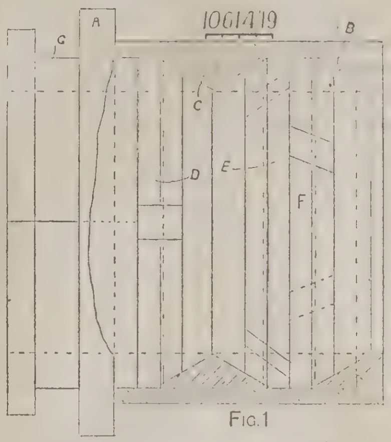
Class 60.7.

Stuffing-box.

A stuffing-box in which three white metal packing rings **D**, **E**, **F**, coned on one face and flat on the other face, are arranged within a housing **A** and between a sleeve **G**, intermediate ring **C**, and neck ring **B**.

In a modification, the casing **A** is secured to the engine cylinder by a ball and socket joint, and the sleeve **G** is pressed inwards by a spring.

In a further modification, a pair of packing rings may be used and provision may be made for the reception of oil or graphite lubricant.



10 figures, 4 claims.

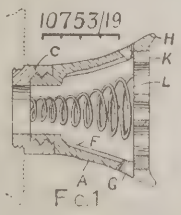
10,753. 14 Apr. C. E. O. Olliffe, New South Wales.

Classes 86.8 ; 05.6.

Telephone Mouthpiece.

To maintain a telephone mouthpiece in an aseptic condition a non-resonating perforated disk **K**, composed of infusorial earth bound with a waxy substance or of plaster of paris, having incorporated therewith a volatilizing germicidal material such as phenol, is contained within the outer rim **H** of a flared conical mouthpiece **A** constructed preferably of glass.

This mouthpiece is attached to an adapter **C** and is grooved interiorly at **F**, the said grooves leading to four vents **G** which serve to drain away any condensed moisture. A helical spring **L** is provided to hold the disk **K** in place.



6 figures, 4 claims.

Illustrated Notes—*continued.*

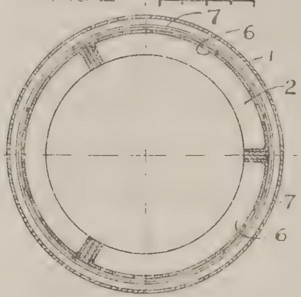
10,975. 5 May. H. Conradi, Victoria.

Classes 81.2 ; 70.1.

Reinforced Concrete Pipes.

A process of manufacturing hollow articles of reinforced concrete, in which the plastic material is introduced within a collapsible core 2, around which is wound the reinforcing medium 7, and permitted to pass through ports 6 in the core until the space between the core and the enclosing mould 1 is filled. The core is then removed and further material added until the desired thickness is reached.

Fig 2 10975/19



2 figures, 6 claims.

11,380. 4 June. U.S. Industrial Alcohol Co., *assignee of* A. A. Backhaus, *act. inv.*, Maryland, United States of America.

Class 66.0.

Liquid Fuel.

A liquid fuel for use as a source of power, comprising a petroleum distillate and an alcohol, together with a blending agent such as an aromatic hydrocarbon or benzol, mixed together in the following proportions:—Ethyl alcohol 25 parts, gasolene 25 parts, kerosene 25 parts, benzol 19 parts; or ethyl alcohol 25 parts, gasolene 25 parts, toluene 5 parts; or ethyl alcohol 25 parts, gasolene 25 parts, kerosene 25 parts, toluene 32 parts. Or again, 25 parts of a solution containing ethyl alcohol 96%, naphthalene 4%, mixed with 25 parts each of gasolene and kerosene.

Instead of using the aromatic hydrocarbon alone, a phenol, such as carbolic acid or cresol, is used, as for example—kerosene 25 parts, gasolene 25 parts, ethyl alcohol 25 parts, cresol 4 parts, benzol 4 parts. Additional blending agents may be used such as aromatic nitro compounds, for example—kerosene 25 parts, gasolene 25 parts, ethyl alcohol 25 parts, methyl alcohol 17 parts, benzol 17 parts, nitrobenzol 17 parts, cresol 17 parts, toluene 17 parts.

No drawing, 24 claims.

11,359. 3 June. G. Davis, Victoria.

Class 57.4.

Labelling Machine.

A machine for labelling canisters and the like, in which the canisters are fed from a shoot on to the table 2 between adjustable guideways 3 and under moving belts 4, which roll them over pasting wheels revolving in a tank 7 and over a label reservoir 15 with adjustable sides and a vertically sliding bottom held up by a spring 24.

The rear end of each label is supplied with a strip of paste on the underside by the pasting belt 26 which passes through a paste tank, and labelling is completed by passing the canisters under the rear pressure roller 14.

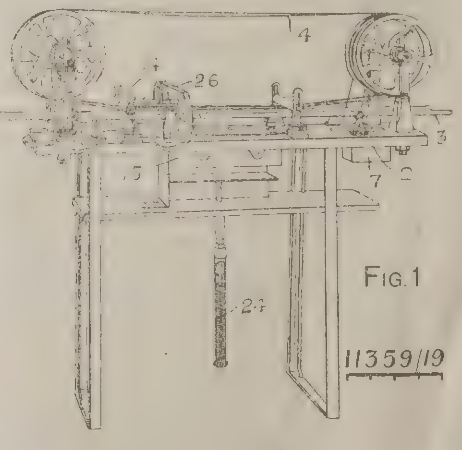


Fig. 1

11359/19

2 figures, 7 claims.

Illustrated Notes—*continued.*

11,649. 3 July. Phil-Har-Chee Piano Player Corporation, *assignee of* T. F. Cheek, *act. inv.*, New York, United States of America.

Class 01.6.

Pressure-controlled Pump for Pneumatic Players.

To effect an automatic control of the pressure in the wind chest of a piano player under variable amounts of opening at the tracker board, the pump is provided with means for allowing a portion of the air to circulate within the pump, consisting of a by-pass closed by a valve which is controlled by an automatic pressure-controlling device.

A stationary casing **50** having a chamber **51** is permanently connected by a pipe **30** to the wind chest, and, by channels **51^1** and **50^{11}**, with a pair of bellows **52** and **58**. A diaphragm **61** within the chamber **51** is normally disengaged from the knob **57^1** of a piston valve **57**. Vacuum created in the wind chest by the pump is communicated to the chamber **51** and bellows **52**, and if only a small amount of air is drawn into the valve chest the vacuum in the wind chest and chamber **51** will become so strong that the bellows **52** will collapse. This movement uncovers the port **63^1** and causes the diaphragm **61** to rise and cover the opening **50^1**. The bellows **58** then collapse and cause the rod **59** to coact with the valve **55** and allow air to enter the bellows **52**. The piston valve **57** will then drop to its former position, and the resultant expansion of the bellows **58** will operate, by a rod **67**, a valve situated in one of two chambers at the back of the pump, causing a portion of the air set in motion by the pump to circulate within the pump.

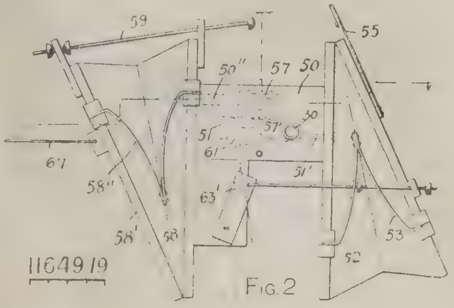


Fig. 2

11 figures, 7 claims.

11,794. 14 July. J. C. R. McCrudden, New South Wales.

Class 89.3.

Machine Gun.

A machine gun which is usable as a shoulder arm and is provided with sound and flash muffling and extinguishing means, the firing being automatic after the first shot.

To manually return the breech carriage **30** and to set the gun to fire the first shot, a withdrawable master pin **44** is accommodated in a hole formed in the sliding bolt **41**. After the first shot, the pin **44** runs freely in a guide slot in the carriage, notched slots **46** forming abutment seatings for the pin, so that when the latch **36** is set downwardly the bolt **41** is positively locked in the carriage. A capped lug on the latch forms an abutment for a ball-headed spring-returned plunger **50**, which assists the return movement of the barrel and breech carriage assembly.

A knuckle **109** on the trigger **106** coacts with a sear tappet **110** actuating the sear **114** which engages the teeth **119** of a tumbler **118** meshing with a rack **123** on the rear end of the spring-actuated striker **124**,

[*Continued next page.*

Illustrated Notes—*continued.*

and a cocking pawl **122** engages with the tappet tail **121** of the tumbler. The safety latch is indicated at **99**.

A flared nut **88** screwed on the barrel forms a bell mouth for the muzzle, and the flash is extinguished in a clearance space formed between the rear end of a cone **132** and the mouth of the bell, the cone also functioning as a sound muffler. The magazine **149** is secured by a spring latch **151** to the casing **72**, and is mounted on a pivot pin **162** supported on a stud hanger which carries a slidable feed arm on a fixed pin **157** projecting from a collar **160** fixed on the radiator. By a one-hand movement the catch **151** is released, the magazine swung on the pin **162** and slid forward, thus bringing the hanger off the pin **157**.

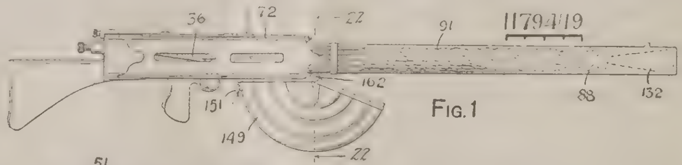


FIG. 1

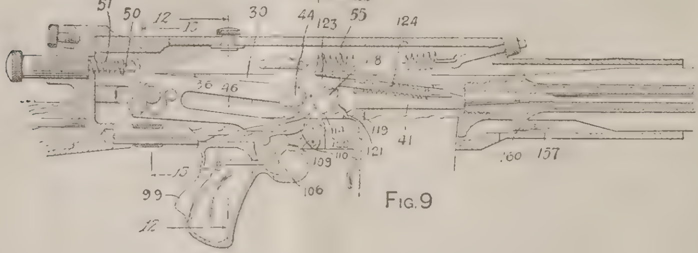


FIG. 9

23 figures, 18 claims.

11,867. 21 July. G. Murphy, Victoria.

Class 45.5.

Bath Screen.

To construct an adjustable and detachable bath screen in sections, a series of panels 20 are connected together by hinged members 21, the lower edges of the sections being furnished with rubber cushions to prevent leakage of water. The panels **20** are fitted to pillars **29** which are attached to the bath rim by screw clamps **30**, and are connected at their upper ends by adjustable connecting stays **31**.

In modifications, each of the sections are clamped to the flange and the sections are connected to each other by hinge pins.

Folding panels are also provided to cover the open front of the screen.

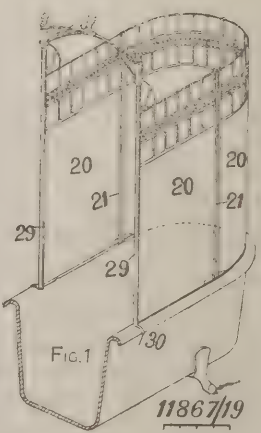


FIG. 1

13 figures, 18 claims.

Illustrated Notes—*continued.*

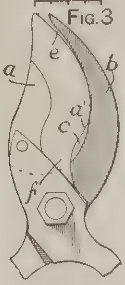
11,943. 29 July. F. H. Maxwell, Vic.

Class 76.3.

Secateur.

A secateur in which the blade **a** is so curved in relation to the curve of the block **b** that a space **c** is provided between the blade edge **a**^{1} and the block, and an inwardly narrowing opening **e** between the top of the curved blade and the block. A portion of the thickness at the heel, next to the cutting edge, is cut away at **f** so as to reduce the friction against the piece of branch being cut.

11943/19



3 figures, 3 claims.

12,030. 5 Aug. G. P. Wigginton, Michigan, United States of America.

Classes 48.8; 54.4.

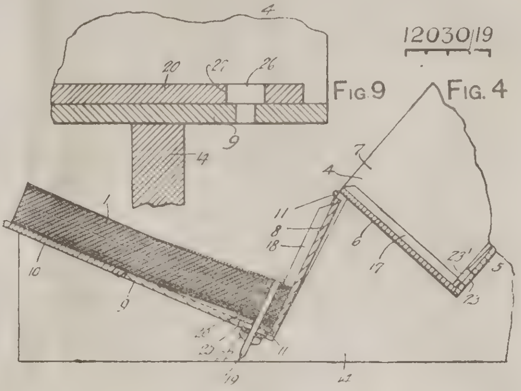
Loose Sheet Support.

To facilitate the handling of loose sheets a box file 4, comprising hinged sections 6, 8, 9, and 10, supported angularly upon a pair of V-shaped rests 17, is fitted with guides 17 and 18 arranged on the rear wall 6 and cover 8 which coact with notches in the sheets, the latter being retained in aligned position by posts 19 inserted through perforations in a binding bar 20 and held therein by spring clutches 22 which are accommodated in holes 25 in the section 9.

The binding member 20 is held in position by pins 26 on the top 9 engaging holes 27. Holes are provided in the bottom 5 to allow the posts 19 to be withdrawn without removing the sheets from the holders. The sheets can be supported in stepped relation by bottoms 28 on the section 5 or in an inclined position by a tapered support.

In a modification, the binder is extended to form a cover in lieu of the cover of the holder, and also constitutes a bottom for the sheet support.

12030/19



14 figures, 15 claims.

11,961. 31 July. R. Hughes, New York, United States of America.

Classes 76.1; 89.3.

Trench Knife.

To secure a trench knife to the back of the hand, leaving the fingers free, the hasp 1 is formed with lugs 9 and 10 carrying a strap 2.

The blade 3 is fixed to a square spindle 15 with trunnions 17, and is opened by pressing a button 20, thus releasing the head 18 of a latch 19 from the spindle 15 which is rotated by a spring-tensioned cord 13 passing over a grooved sheave 14 on the spindle.

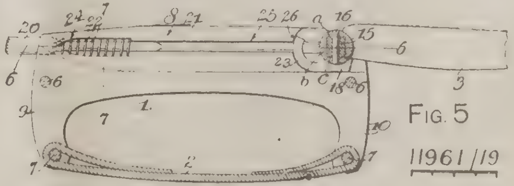


Fig. 5

11961/19

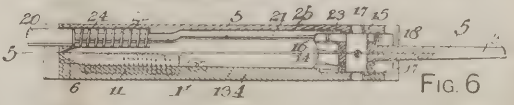


Fig. 6

8 figures, 15 claims.

Illustrated Notes—*continued.*

12,125. 13 Aug. E. Waters, *communicatee of* A. E. Fallwell, *act. inv.*, N.Z.

Class 70.1.

Concrete Block Moulding Machine.

In moulding blocks suitable for the construction of cavity walls, a machine is provided having cores arranged within a mould box, which after being filled with concrete is adapted to be withdrawn, along with the cores, away from the blocks, the latter containing cavities of approximately elliptical shape with neck passages extending between.

The mould box **C**, which is vertically slidable on pillars **K** and **G** by means of rack and pinion gear **D, E**, has secured within it a full elliptical and two half elliptical cores, interposed by two pairs of split hollow blocks which form the neck passages and serve to locate the tie bars **N**.

In moulding a block the box **C** is raised to its highest limit, with the boards **M** resting on the tops of pillars **G**, and concrete is poured in around the cores. The box is then lowered carrying with it the cores, leaving the moulded blocks resting on the boards **M** supported by the pillars **G**, and the tie bar locating blocks are removed.

In a modification, the moulding box is formed with hinged sides and sliding ends to which the half cores are fixed, the central core being fixed to the mould box bottom.

Fig 2

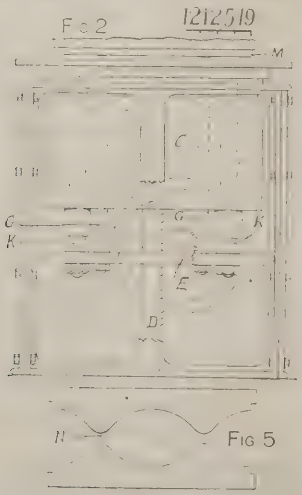


Fig 5

8 figures, 6 claims.

12,275. 27 Aug. C. Ryan N.S.W.

Class 44.2.

Boot Fastener.

To provide for adjustment to suit the spacing of the eyelets in boots, leggings, and the like, the parallel hooked bars **A** of a fastener, as in 3404/17, are connected by a sliding joint consisting of lugs **B¹** and **C¹** formed on the ends of the cross-bars **B** and **C** respectively.

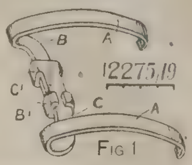


Fig 1

3 figures, 2 claims.

12,328. 1 Sept. I. H. Hill, Victoria.

Classes 81.1 ; 81.2.

Concrete Building Block.

To construct a wall of blocks which enable vertical reinforcing rods to be accommodated in the blocks for the whole height of the wall without having to thread the rods through the blocks, the blocks **a** have recesses **b** in the upper and lower edges for rods **c**, and vertical dove-tail recesses **d** and **e** on their inner faces to take vertical reinforcing bars **g** and concrete binding pieces **f** shaped to overlap the adjacent edges of the blocks. The binding pieces **f** are provided with wires **h** for affording cross ties between two parts of a double wall.

In a modification, the edges of adjacent blocks overlap each other and have vertical openings for the vertical bars which are grouted in in cement.

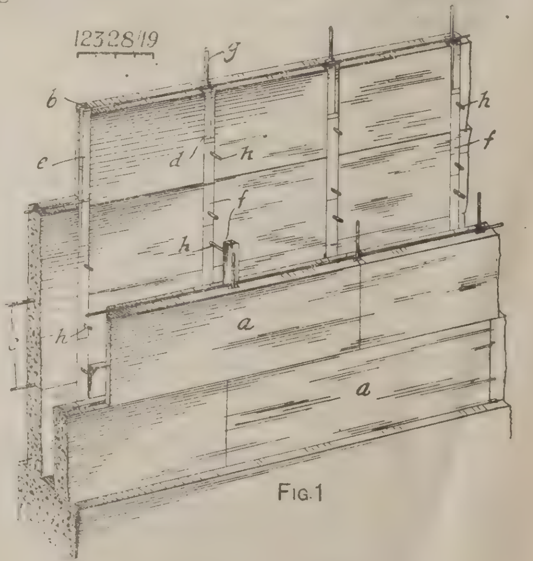


Fig.1

6 figures, 6 claims.

Illustrated Notes—*continued.*

12,448. 9 Sept. A. A. Clarke, Texas, United States of America.

Class 75.2.

Polisher.

A device for the treatment of extended surfaces, in which a motor-driven drum 1 covered with sand paper or polishing material 2 is adjustably supported in a frame 3 which is manually moved over the surface to be treated.

The frame 3 is carried by end standards 4 containing screwed spindles 9 which can be rotated to raise or lower drum 1 to the work by means of sprocket 6 and chain 7 turning sprocket wheels 8^1. The frame posts 9 have at their bottom ends cross-bars 10 which are covered with felt 11.

In a modification, adjustment of the roller to the work is attained by turning a horizontal handle, which works bevel gear meshing with pinions on screw-threaded posts having cushions on their lower ends, and, in a further modification, the adjustment is obtained by turning a thumb-screw actuating bevel gearing.

In a further modification, the surface treating member is in the form of a travelling belt passing at one end around the motor drum, and at the other end around a roller, a pressure roller keeping a tension on the belt.

In a still further modification, the surface treating member on the drum is driven by the motor through suitable gearing, vertical adjustment being effected by a thumb-screw on the handle, through a flexible shaft and bevel gear connected by a chain with sprockets on screw-threaded posts.

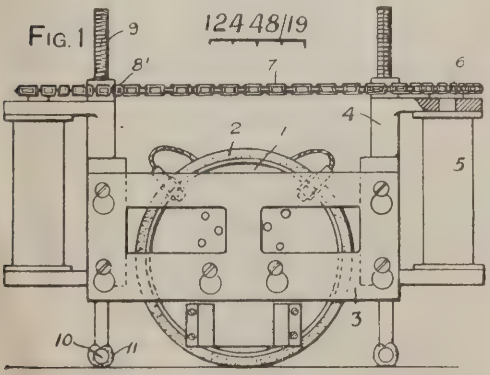


FIG. 1

12 figures, 6 claims.

C.12057.—3

12,500. 12 Sept. Bebarfalds Limited, *assignee of* G. M. Chambers, *act. inv.*, N.S.W.

Class 42.3.

Drop-head Sewing Machine.

A machine in which the base board 14 is lowered into the cabinet by a cord 11 operated by a folding extension leaf hinged to the top of the cabinet. The fly-wheel is covered by a dished dress guard, the pitman is fitted with an adjustable head, and the treadle is mounted between adjustable centres.

A link 12, pivoted to the cabinet frame 7, is connected to a lever 13 pivoted to the base board 14 which is fitted with a flap 15 adapted to fold upwards and slide down the curved end guides 16. A front flap 18, attached to the base board by a pivoted link 17, folds down to protect the machine head when lowered into the cabinet.

The wooden pitman has a metal end strap into which a set pin is screwed for adjusting the crank-pin cap. The treadle is pivoted between adjustable centres mounted in short arms clamped to a rectangular cross-bar, and the crank bearing is formed in an end bar mounted between lugs on the dished fly-wheel casing.

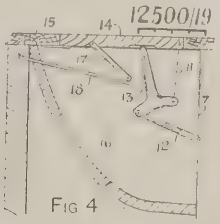


Fig 4

6 figures, 7 claims.

12,666. 27 Sept. H. T. Johnson, M.I.M.E., England.

Date applied for under International or Intercolonial Arrangements, 13th Sept., 1918, Great Britain, No. 128,083.

Classes 57.4; 93.1.

Bag Holder.

To facilitate bag filling, the mouth of the bag is folded over arms 4 projecting from upright shanks 2 and automatically held open by the resiliency of the shanks.

The shanks are connected to the circular base 1 by inversely twisted partial loops 3, all of which are of one piece.

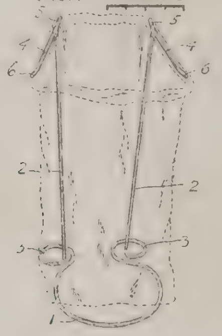
[*Continued next page.*

Illustrated Notes—*continued.*

In a modification, a supplementary base is connected by sleeves to the shanks.

In a further modification, the shanks are telescopic and a detachable trolly is used.

Fig. 1 12666/19



7 figures, 6 claims.

12,835. 8 Oct. J. Alston, Victoria.

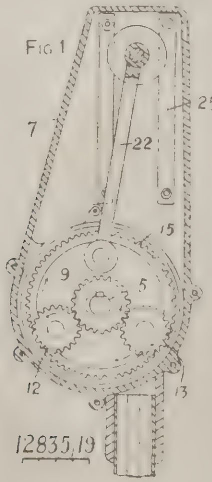
Class 90.7.

Windmill Head Gear.

To provide a compact head gear for windmills which is easily assembled and lubricated, the wheel shaft 5 drives a crank disk 9 through planet pinions 12, 13 mounted thereon and rolling within a fixed annular rack 15.

The journal of the crank disk serves as bearing for the shaft 5, and the whole of the driving mechanism, together with the guides 25 of the rolling cross-head of the return connecting rod 22, is contained within a narrow casing 7, the lower part of which forms an oil bath.

Fig. 1



12835/19

2 figures, 3 claims.

12,836. 8 Oct. J. Burri, Switzerland.

Date applied for under International or Intercolonial Arrangements, 8th Oct., 1918, Switzerland, No. 95,823.

Classes 06.4; 02.4.

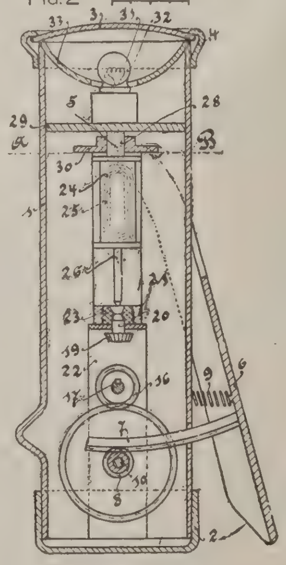
Magneto Electric Lamp.

To provide current for a hand lamp the rotary field of a magneto is operated by hand, and is supported by a stirrup-shaped frame which slides into the lamp casing.

The operating lever 6, pivoted to the casing 1 at 5, carries a rack 7 which gears with a pinion 8 mounted freely upon a shaft 10 and provided with an arm carrying a pawl engaging in a ratchet wheel keyed to the shaft 10. A second pawl 15 prevents backward movement. Loosely mounted upon the shaft is the barrel of a drive transmitting spring, its inner end being connected to the shaft 10, and its outer end attached to the barrel which has a toothed drum which, through spur and bevel gearing 19, rotates the magneto field magnet 21 mounted upon a stirrup-shaped frame 22.

The final positioning of the frame in the lamp casing is effected by the shafts 10 and 17 projecting and fitting into holes in the casing.

Fig. 2 12836/19



3 figures, 3 claims.

Illustrated Notes—*continued.*

13,053. 27 Oct. E. Waters, *communicatee of* Westinghouse Air Brake Company, *assignee of* Harry Frank Woernley, *act. inv.*, Penn., United States of America.

Classes 96.3 ; 04.2.

Automatic Electric Coupler.

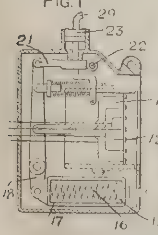
To automatically couple electric train line circuits between the cars, a movable contact carrier is actuated by storing the force, derived from the coming together of the couplers, in a spring which is tripped when the final coupled position is reached.

When the two cars are brought together a tappet 14 on each car coupler is depressed by the counter coupler, thereby compressing the spring 16, moving the head 15, arm 42, and crank 43 to open the shutter 37 which compresses the spring 40.

When the final coupled position is reached, fluid under pressure flows through pipe 29 to piston 23, forcing it inward to trip the arm 21 from the stop 22, thereby releasing the spring 16 which actuates the lever 18 and projects the contact carrier 11 forward so that the contact terminals 12 make contact with the corresponding contact terminals of the counterpart coupler of the adjoining car.

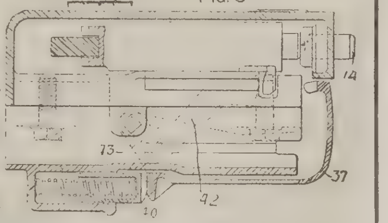
When the cars are uncoupled the spring 27 acts to return the lever 18, the slide or contact carrier 11, yoke 17, and the tappet 14 to the normal position, and returns the trip arm 21 against the stop 22; the shutter being closed by the action of the spring 40.

Fig. 1a



13053/19

Fig. 5



10 figures, 11 claims.

13,178. 3 Nov. The Betan Company, *assignee of* F. W. Merritt, *act. inv.*, Minnesota, United States of America.

Class 66.8.

Radiator.

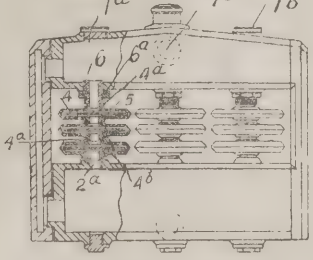
A radiator in which the built-up circulating elements 4 connecting the top and bottom circulating chambers each consists of a thin hollow body 4 open at one end, and containing a baffle plate 5 having a shoulder thereon which closes the open end of the unit, and lugs which prevent collapse of the units under pressure.

A female nipple 4^a, formed on the outer surface of each unit, and communicating with the interior of the element at one side of the baffle plate, engages with a male nipple 4^b on the adjoining element when building up a column. Each column is secured in position by an adjustable nipple 6 engaging with the nipple 4^a on the uppermost element and locked by a jam nut 6^a, the threaded lower portions 4^b engaging with the apertures 2^a.

Apertures 1^a permit the plugging of any column of elements to curtail circulation, the apertures being closed normally by the plugs 1^b and 2^c.

Fig. 6

13178/19



6 figures, 7 claims.

13,138. 31 Oct. C. Metzger, N.S.W.

Class 80.3.

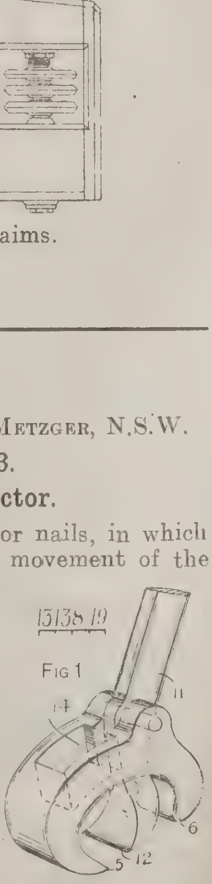
Spike Extractor.

An extractor for spikes or nails, in which biting edges 5 and 12, on movement of the lever 11, close on to and grip the spike, after which the tool fulcrums on the heel 6 lifting the biting edges and extracting the spike.

If the spike is long the lever is manipulated to take successive grips thereon, so that the outer end or head passes through the aperture 14.

13138/19

Fig 1



2 figures, 3 claims.

Illustrated Notes—*continued.*

13,484. 1 Dec. W. D. Oddy, England.

Class 56.8.

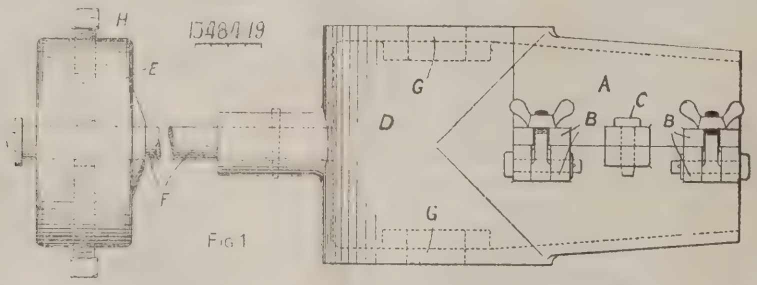
Balancing Propeller Blades.

An apparatus for checking the weight of aeroplane propeller blades of various types, which consists of a blade holder supported on one end of a bar, the other end of which carries an adjustable balance weight.

The blade to be tested is held within a sleeve **A**, made in halves clamped together at **B B** and accurately located by pins **C**, and is balanced against a weight **E** held in a predetermined position by set-screws **H** and slidably mounted on a bar **F** fitted into the fulcrum member **D**, which is bored at **G G** to receive the spindle upon which it balances.

If the blade is too heavy, portion of the timber is pared therefrom, and if it is too light, the extra weight is made up by coating the blade with glue-size.

In a modification, the weight **E** is bored eccentrically to be used when the centre of gravity of the blade falls below the axis of the fulcrum pin.



4 figures, 4 claims.

13,533. 4 Dec. G. P. Washburn, California, United States of America.

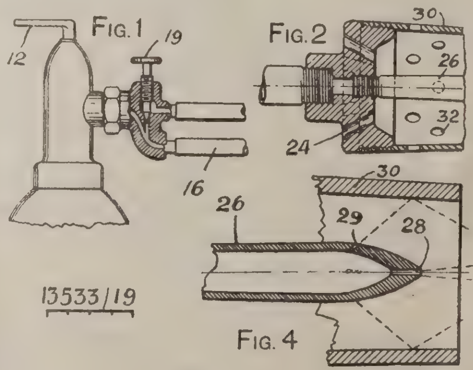
Date applied for under International or Intercolonial Arrangements, 14th Nov., 1918, United States of America, No. 1,311,731.

Class 23.7.

Acetylene Burner.

To provide a burner capable of directing an intensely hot-pointed flame for cutting or welding metals, acetylene and air under pressure are intermixed and pass through a diverging jet which is surrounded by a sleeve having holes for supplementing the air supply.

The supply of air and acetylene are regulated respectively by handles **19-12**, the mixture passing along pipe **16** to the burner which comprises a jet **26** having a central hole **28** and outwardly diverging holes **29**, the jet being concentrically located within a sleeve **30** which has supplementary air holes **32, 24**.



4 figures, 4 claims.

Illustrated Notes—*continued.*

13,550. 5 Dec. O. G. Stark, *assignee of* J. Flammang, *act. inv.*, Missouri, U.S.A.

Class 60.7.

Process of Making Pistons.

To enable packing rings to be dispensed with, the resiliency of the metal, of which a piston is composed, is utilized to press an expansible portion of the piston against the cylinder wall.

A ring 2, integral with the piston head, and connected to a lower ring 1 by portions 3, is first split at 7, and a gudgeon pin inserted in holes in bosses 4 to force the two parts of ring 2 apart. A groove 11, into which is placed plate 12, is then formed in the head plate, and below plate 12 is inserted a key 13. Lugs 6 are bolted together and the piston machined so that the upper ring is of greater diameter than the remainder, oil scraping bevelled portions being formed on the upper and lower edges of rings 1 and 2, and oil collecting grooves 18 around the lower ring.

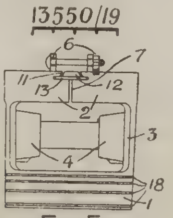


Fig. 5

7 figures, 4 claims.

13,583. 5 Dec. Thacher Propeller and Foundry Corporation, *assignee of* T. O. Thacher, *act. inv.*, New York, U.S.A.

Class 70.2.

Casting Screw Propellers.

To facilitate the casting of propeller blades, the pattern is split along the pitch plane, and the halves are secured to pattern blocks 4 having upper surfaces which are cut to the contour of the pitch plane in a machine provided with a straight edge swinging on a spirally threaded post. The block supported patterns are then used to form the mould within a flask, the mould being baked in an oven to form a smooth surface on the casting, and, for casting multi-bladed propellers, several flasks may be secured together around a central boss core.

The half pattern 22 is accurately secured on the block 4 while fixed on a dowel pin 3 in a conical box 1, which has a flat surface 5 a little larger than the flange of the blade. The box is then bolted to the cover section of the flask and rammed with sand, after which the box is removed. The half pattern 21 is fixed to a similar block 4a which accurately fills the upper part of the box, and is secured to a base plate 7 having an upright plate 14 corresponding to the flat 5 on the box 1. The plate 7 is attached to the flask section 24 which is then rammed with sand, after which the pattern is removed and, the half moulds having been baked, the sections of the flask are bolted together in readiness for pouring the metal. The bolt holes 26 may be cast by means of projections formed on a separate core which fits into the cavity made by the plate 14.

Small three-bladed propellers may be cast in a circular flask in which three pattern blocks are secured, and when casting large propellers in several flasks, the meeting faces of the flasks are machined to ensure accurate assemblage.

To remove impurities from the molten metal it is poured into a skimming trough which is formed in the sand and communicates with end compartments 144 by means of upwardly inclined passages 147. The clean metal flows down gates 140 leading into the ends of the blade cavities. To further remove impurities a thin fin is cast around the edges of the blades and is removed when the casting is cold.

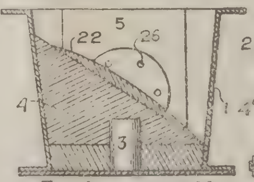


Fig. 4

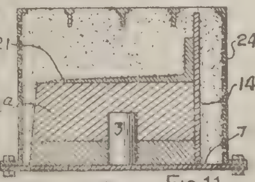


Fig. 11

13583/19

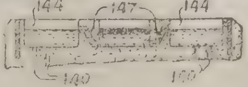


Fig. 29

29 figures, 16 claims.

Illustrated Notes—*continued.*

13,618. 8 Dec. McKenzie, Holland & Westinghouse Power Signal Company Limited and T. J. Hornblower, England.

Date applied for under International or Intercolonial Arrangements, 10th Dec., 1918, Great Britain, No. 20,557/*18*.

Class 99.5.

Railway Signalling System.

To reduce the iron losses in the magnetic circuits of relay apparatus connected into the track circuits of an alternating current signalling system, the relays are supplied with pulsating unidirectional currents.

The track circuits comprise rails **1** and **2**, the primary winding **3** of a supply transformer **4**, a regulating resistance **5**, and the primary winding **6** of a transformer **7**. The relay winding **10** is connected through a current rectifying device **9** of the vacuum type to the secondary winding **8** of the transformer **7**, and is thus supplied with a pulsating unidirectional current.

The rectifying device may be an aluminium cell or a mercury vapour rectifier.

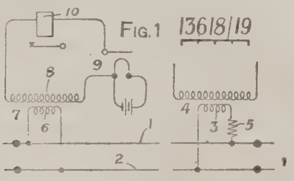


Fig. 1 13618/19

2 figures, 3 claims.

13,661. 11 Dec. F. N. Hallett, Washington, United States of America.

Date applied for under International or Intercolonial Arrangements, 11th Dec., 1918, United States of America, No. 1,320,225.

Classes 71.6; 72.1.

Plate Machine.

To draw steel plates together prior to riveting, a shaft **9**, having sliding crossheads **16** and **17**, is inserted through the plates and held by a key **12**. On the inward movement of the toggle-joint arms **21**. **22**, under control of the U-shaped pitman **29** attached to the piston **6** movable under fluid pressure within the cylinder **5**, the plates are forced together by the abutment **20**.

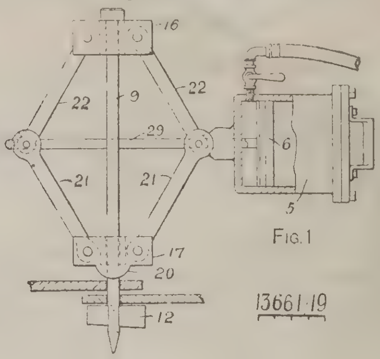


Fig. 1 13661/19

2 figures, 4 claims.

13,744. 19 Dec. E. H. Degory, Eng.

Class 66.5.

Carburettor.

A carburettor in which the complete and rapid vaporization of the fuel air mixture, before it reaches the fuel inlet pipe, is effected by the provision of a passage **l** connecting the fuel chamber **a** with an annular chamber **k** formed in the induction tube **b** and communicating with openings **h** in the choke tube **f**.

Communicating with the passage **l** is an air inlet **n** which may be regulated by the needle valve **o**. Arranged within a channel **p** is a spring-controlled piston adapted to control the ports **t** and **u** to maintain a constant mixture of air and gas at all altitudes.

In a modification, the choke tube may be made in two parts which are of conical formation at their adjacent ends.

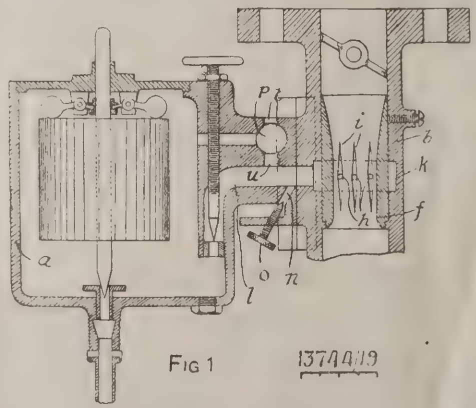


Fig 1 13744/19

3 figures, 5 claims.

Illustrated Notes—*continued.*

13,815 29 Dec. F. Humphris, Eng.

Classes 72.1; 74.6.

Adjustable Spanner.

To control the movement of the sliding jaw of a spanner, pipe wrench, or pipe cutter, the sliding jaw **a**^{6} is connected by a link **e** to a screwed rod **d** which is engaged by a sleeve nut **b** in tight frictional contact with the tapered end **h**^{3} of the handle **h**. Grooves **b**^{1} and **c**^{1} are provided on the sleeve nut and handle end of the body part **g** respectively, to prevent longitudinal movement of the former.

When used as a spanner the faces of the jaws **a** and **f** are formed at right angles to the sliding extension **a**^{6}, and are provided with webs which enable a nut to be gripped on four sides. Projections may be formed on the jaws to engage nuts in a recess after the manner of an adjustable box spanner.

When used as a pipe cutter a pair of knife-edge wheels is mounted on each jaw.

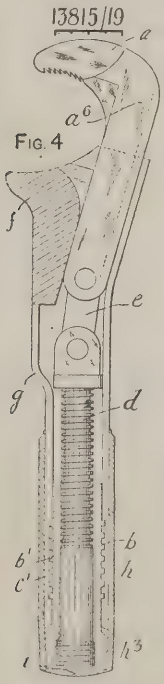


Fig. 4

9 figures, 5 claims.

13,826. 29 Dec. W. M. Burke, Eng.

Class 10.7.

Meat Cutting Machine.

A machine in which meat is fed to a hopper **C** and falls on to a power driven revolving drum **A**, the periphery of which is concave in cross section to accommodate knives **D** which revolve at right angles to the drum, the meat being carried past the knives on to a delivery shoot **E**.

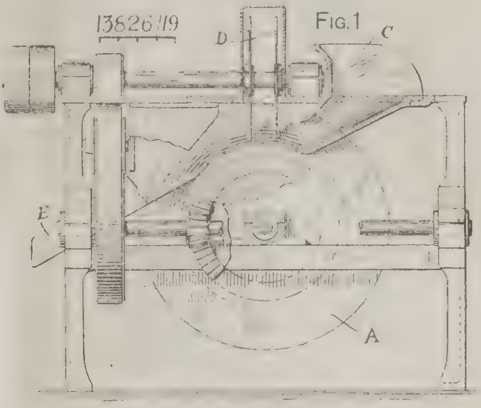


Fig. 1

2 figures, 3 claims.

13,843. 30 Dec. W. H. Clifford (Lord Clifford of Chudleigh), England.

Date applied for under International or Intercolonial Arrangements, 28th Jan., 1919, Great Britain, No. 2088/*19*.

Classes 62.8; 72.3.

Flexible Shaft Coupling.

A coupling for connecting a machine tool to a driving machine through a flexible shaft, in which the driving shaft of the machine carries a sleeve which corresponds in size and form with a sleeve on the flexible shaft so that the tool may be fitted to either.

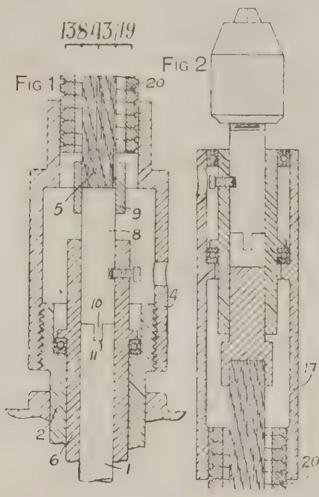
The shaft 1 has a sleeve 6 projecting from the bearing 2 to which is attached the tube

[*Continued next page.*

Illustrated Notes—*continued.*

4 which carries the flexible shaft covering **20**, to which is fixed, by means of a sleeve **9**, the shaft **8** provided with a cross driving member **10** adapted to engage in the slot **11** of the shaft **1**.

The outer coupling is similar in size and form, but the flexible coupling **20** has attached a tubular handle **17**.



2 figures, 2 claims.

13,847. 30 Dec. Siemens Brothers and Company Limited and T. Pettigrew, Eng.

Date applied for under International or Intercolonial Arrangements, 28th Mar., 1919, Great Britain, No. 132,196.

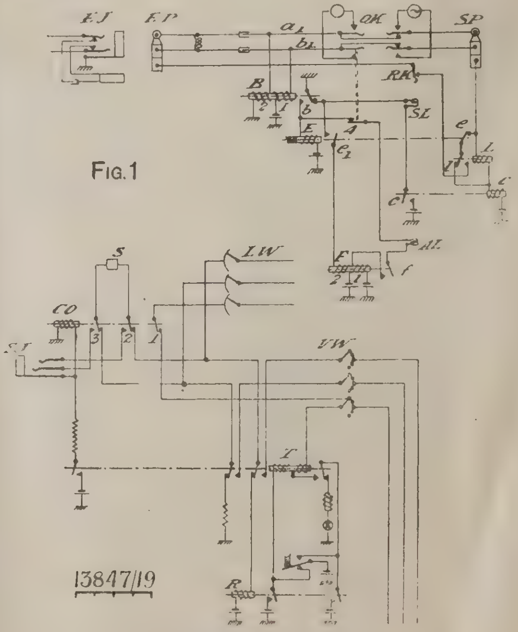
Class 05.7.

Private Branch Exchange System.

In an automatic private branch exchange system in which connexion with a public exchange is controlled over a manual switchboard, circuit arrangements are provided which permit an extension line subscriber to control his connexion to the manual switchboard by the operation of his switch-hook although the manual connexion has not been cleared.

On insertion of the plug **SP** in the jack **SJ** in the establishment of a call from the public exchange over the private branch exchange to an extension subscriber **S**, the cut-off relay **CO** is energized over the sleeve circuit in series with relay **C**. Relay **CO** connects subscriber **S** to the talking conductors, and relay **B**. **E**, and **L** are energized. A circuit for the operation of relay **F** and lamp **AL** is controlled by subscriber **S** through the medium of his impulse dial and relay **B**. Should subscriber **S** desire a connexion over the automatic equipment while the exchange call is held, release is effected by subscriber **S** hanging up, and on the consequent de-energization of relays **B** and **E**, relay **CO** is short-circuited over back contact **e**, key **RK**, and ground at jack **EJ**, and falls back to again connect subscriber **S** to the automatic equipment. When required, operation of key **RK** serves to remove the short-circuit from relay **CO** which energizes to again connect subscriber **S** to the manual board and the held call.

In a modification, the cord circuit is controlled by a relay energized in a series circuit including the cut-off relay and off-normal contacts of the automatic equipment and a holding key at the manual switchboard.



2 figures, 8 claims.

Illustrated Notes—*continued.*

1920.

13,951. 8 Jan. Essex Motors, *assignee of* S. I. Fekete, *act. inv.*, Michigan, U.S.A.

Class 66.8.

Cooling Internal Combustion Engines.

To obviate the creation of steam pockets in water cooling systems of the thermo-siphon principle, the cooling fluid is directed first on to the cooler parts of the engine and thence to the hotter parts, finally passing into the outlet manifold over the exhaust valves, so that the cooling fluid when at its maximum temperature rises and escapes immediately into the outlet manifold.

The water entering through inlet pipe **D** and tube **46** is distributed lengthwise through the jackets, a slot **47** in the tube permitting the escape of a portion of the fluid to facilitate circulation. Part of the fluid passes around the exhaust valves **15** and passages **16** and passes up through holes, such as **37**, **43**, to the outlet **C**.

Another portion of the water rises on the side of the cylinders away from the exhaust valves and escapes through holes, such as **33**, **35**, and **38**, into the jacket in the removable head **a**, where, after circulating around the inlet valves **18**, it escapes into the outlet **C**, the hot parts over the exhaust valves heating the water and stimulating circulation.

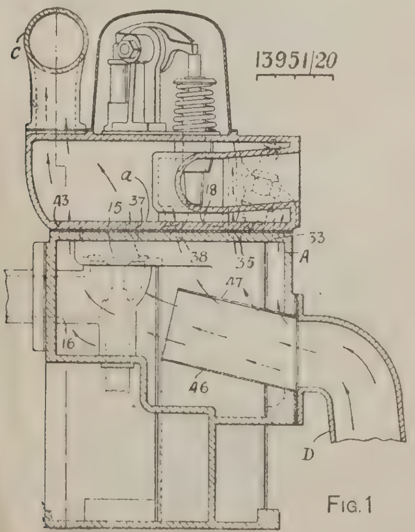


Fig. 1

3 figures, 7 claims.

13,958. 8 Jan. J. A. Singmaster, F. G. Breyer, and A. E. Hall, Pennsylvania, United States of America.

Date applied for under International or Intercolonial Arrangements, 1st Aug., 1919, United States of America, No. 1,322,091.

Classes 15.1; 15.2; 15.6.

Production of Metallic Oxides and Sulphate.

To prevent the formation of "blow holes" in the ore and fuel charges for the production of oxides and sulphate of the volatilizable metals, as zinc oxide or lead sulphate, by the Wetherill process, the fuel and ore are made into small pyramidal-shaped briquettes prior to feeding them to the hearth grate of a Wetherill furnace, and are, for example, mixed in the following proportions:—800 lbs. of anthracite dust, 67 lbs. of waste sulphite liquid at 30° Bé., 960 lbs. of zinc ore containing 20% zinc oxide and 16% silica, together with 480 lbs. of dust ore containing 23% zinc oxide and 8-9% silica. When producing lead sulphate the zinc material of the briquette is replaced by a plumbiferous material.

Pyramidal-shaped fuel briquettes may be used as a bed charge with the mixed ore and fuel briquettes as a superimposed working charge.

No drawing, 6 claims.

14,130. 27 Jan. Southey Gas Producers Limited, *assignee of* E. W. Thomas, *act. inv.*, England.

Class 66.5.

Vaporizer.

A vaporizer for paraffin and the like, in which an efficient utilization of the oil fuel is secured by surrounding the jet **7** with a supply pipe **14** passing through the flame chamber and conveying a proportion of inert gas to a chamber above the jet.

Within the casing **12** of the wick chamber is a sleeve **36** in which ports **47**, **46** register with ports **35**, **34** in the casing. An offset on the air distributor **43**, in conjunction with a gallery **36a**, supports the wicks **10**. A port **17** in the wick chamber permits the flames to externally heat the chamber **16**, at the top of which is a baffle **27**, openings in which communicate with a chamber **18** in which is arranged a baffle **19** which serves to collect any fuel still in liquid form. The

[*Continued next page.*

Illustrated Notes—*continued.*

air throttle **21** and gas throttle **22** are adapted to be moved in unison or independently.

In a modification, the baffle **19** may be scroll-shaped and have pipes to return the liquid fuel collected on to the baffle **27**.

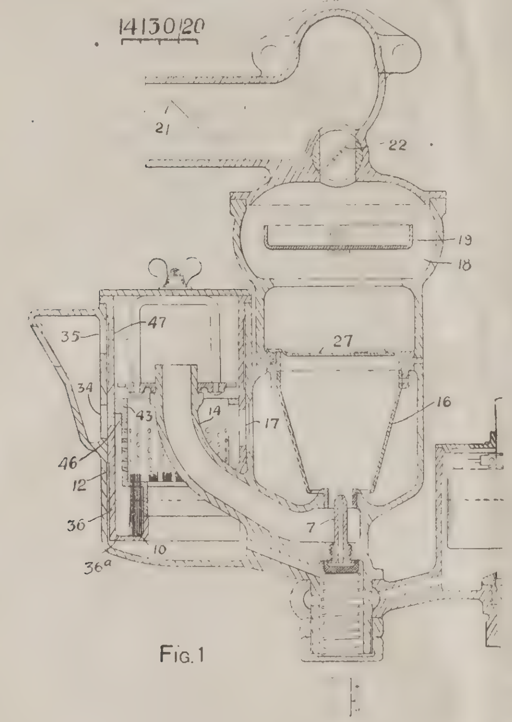


Fig. 1

6 figures, 13 claims.

14,215. 2 Feb. Aktiebolaget Svenska Kullagerfabriken, *assignee of* N. A. Palmgren, *act. inv.*, Sweden.

Class 60.8.

Roller Bearing.

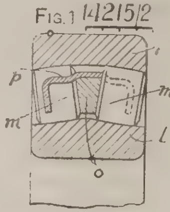
To absorb side strains due to axial shock, the rollers of a bearing having a double row of rollers are given an outwardly curved rolling surface so that they bear against one or both of the rolling surfaces of the races **k** and **l** along their entire length.

The inner race **l** with the rollers **m** is capable of turning in any position relatively to the outer race, so that the bearing is self adjusting, a ring **o** preventing the rollers from turning and a retainer **p** preventing them from dropping out.

In a modification, the rollers are provided with studs which fit in holes in the retainer, so that the studs in one row of rollers project between the rollers of the other row.

In a further modification, a cone-shaped flange on the rollers bears against the inner race.

Fig. 1



3 figures, 6 claims.

14,178. 30 Jan. W. S. F. Snow, N.Z.

Class 81.9.

Collapsible Gate.

A vertically-opening gate in which two vertical channelled frames **1** and **6** are united by rails **5** pivoted thereto by bolts **4** and **7**, the frame **6** resting upon the frame **1** when in open position.

The gate is secured, when open, by a catch **8** pivoted on a bolt **9** in the frame **1** and engaging a stud on the frame **6**.

When the frame is lowered it passes between lateral bars secured to gate post to resist lateral pressure.

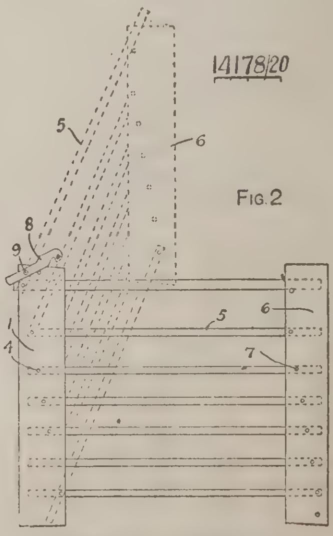


Fig. 2

4 figures, 4 claims.

Illustrated Notes—*continued.*

14,301. 6 Feb. I. Pulverman, Penn., United States of America.

Date applied for under International or Intercolonial Arrangements, 21st April, 1919, United States of America, Serial No. 291,567/*19*.

Class 97.85.

Tyre Valve and Gauge.

To continuously indicate the pressure in a tyre, the inflating valve has a long sleeve 5 in which the valve body 8 slides while being drawn inward by a spiral spring 10.

A rubber tube 14 communicates with the tyre, the pressure within which forces the valve body 8 outwards against the action of the spring 10.

The valve body 8 is graduated at 24 to indicate the pressure, and a transparent cover cap 25 is provided.

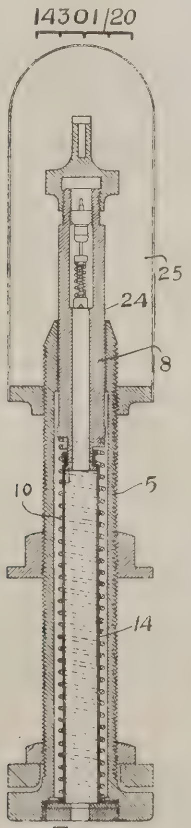


Fig. 1

2 figures, 6 claims.

14,291. 6 Feb. C. F. Doane, California, United States of America.

Class 36.9.

Cheese Making.

To facilitate the manufacture of Swiss or Emmenthaler cheese, the milk is heated to 143° F. and cooled, and before the rennet is added an acid or salt, capable of facilitating the rennet action, is introduced.

Bacterial cultures, capable of producing a high percentage of lactic acid at high temperatures and producing the "eyes," are added. The curd is then cut, stirred, and pressed. The hard rind is formed by immersion in brine, and the cheese is matured by placing in a cold room, after which a warm room is used to develop the "eyes" and a cold room to produce the flavour and texture.

No drawing, 5 claims.

14,335. 11 Feb. V. L. Gay, *act. inv.*, and J. G. Gay, *assignee*, Victoria.

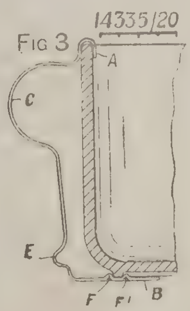
Class 24.7.

Cup Handle.

A detachable handle for cups, which is formed of flat metal, with a hook **A**, a finger loop **C**, a spring loop **E**, and a gripping tongue **B** which is provided with nipples F, F¹.

In modifications, the metal may be stiffened by being ribbed.

Fig 3



4 figures, 2 claims.

Illustrated Notes—*continued.*

14,415. 17 Feb. A. Arato, Italy.

Classes 95.7; 95.5.

Steering Gear for Trailers.

To cause the steering wheels of a four-wheel trailed car to follow the tracks of the tractor wheels, a yoke **7** is pivotally mounted on a pin **6** on each headstock of the frame **1**, and is connected by rods **9** to the truck **3** which is connected by rods **10** to the other truck in such a manner that the motion of one yoke is transmitted to the same extent and in the opposite direction to the other yoke.

In a modification, the yokes are connected one with the other by two rods, and each yoke is connected by a bar to an arm solid with a swivel axle, and an arm secured to this axle is connected by a rod to an arm on the corresponding swivel axle.

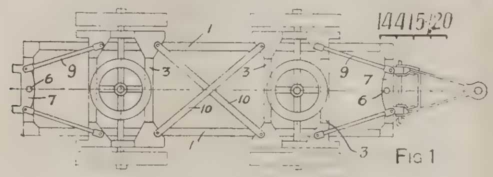


Fig 1

4 figures, 3 claims.

14,499. 25 Feb. J. L. Hellen, Norway.

Class 97.2.

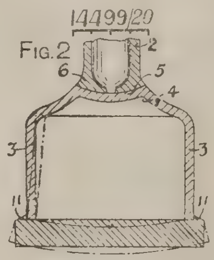
Vehicle Wheel.

A vehicle wheel made of metal, in which the felloe **3** is formed with sockets **5** to receive the ends of the spokes and bent into a ring, the ends being welded together after the spokes have been placed in position.

The sockets **4**, which form strengthening parts on the inner side of the felloe, may be either concave or convex in shape and provide a closely fitting foot for the inner end portions **6** of the spokes.

In a modification, the expansion of the felloe may be effected by crimping.

Fig. 2



4 figures, 3 claims.

* * *

Commonwealth Specifications.

The following Specifications are now on sale :—

1904-10.

1 to 20,337, Vols. 1 to 102, complete with title pages, &c.

1911-15.

1 to 7599, Vols. 103 to 140, complete with title pages, &c.
7600 to 7799, Vol. 141, incomplete.
7800 to 8599, Vols. 142 to 145, complete with title pages, &c.
8600 to 18,302.

1916.

1 to 646, and all subsequent accepted Specifications.

The following Specifications, acceptance of which was advertised in *Official Journal* of the 13th July, 1920, are now printed and on sale :—

1915.

15,710. Aktiebolaget Centrali (Peterson).

1917.

5239. Roxburgh, Sanderson & Sanderson.

1918.

6946. Greenwood.
6947. Greenwood.
8395. Muir's Pty. Ltd. (Glynn).
8936. Nitrogen Products & Carbide Co. Ltd. (Perkin).

1919.

9718. Thorssell & Lundén.
10,259. Woodhouse
10,549. Aktiebolaget Ljungströms Angturbin (Ljungström).
10,632. Cameron.
10,722. Taylor & Marks.
10,977. Western Electric Co. Ltd. (Heising).
11,184. Farquhar & Hill.
11,204. Lymn & Rambush.
11,351. W. & T. Avery Ltd. (Mitchell & Parnall).
11,605. Jelfs & Myles.
11,620. McGrath & Milford.
11,631. Mintern & Brehaut.
11,664. Parker.
11,665. Abbott.
11,678. O'Brien & Morse.
11,788. Denton Hats Ltd. & Ashworth.
11,838. Sulman & Ballantine.
11,971. Crawford & Taylor.
12,007. Heimann.
12,039. Allan.
12,229. Automatic Electric Co. (Wicks).
12,271. The British Westinghouse Electric & Mfg. Co. Ltd. (Guy).
12,284. Nicolai.
12,437. Carrette.
12,522. Pedler.
12,600. Browne.
12,654. Ellis & Sawtell.
12,721. Western Electric Co. Ltd. (Blackwell & Baldwin).
12,778. Hiscock.
12,946. Welsh.
12,949. Tegel.
13,012. Hoke.
13,140. McClellan.
13,176. Leech.
13,258. Snelling.
13,322. Benard.
13,380. Shunichiro Midzushima.
13,485. Clews.

11,066. Muir's Pty. Ltd. (Glynn). Cognate sheet.

Commonwealth Specifications—*continued.*

1920.

13,874. Ross.
13,904. Automatic Electric Co. (Smith).
14,004. Automatic Electric Co. (Jacobsen).
14,008. Drew & Drew.
14,140. Firth.
14,152. Tonkin & Evans.
14,308. Taylor & Marks. Cognate sheet.
14,153. Walker.
14,229. Mason.
14,273. Ray.
14,298. Hammett.
14,310. Durham Duplex Razor Co. (Sheehan).
14,706. Blue Bird Mfg. Co. (Ireland).

Further particulars will be found in the Illustrated Notes, pages 946 to 971 of Vol. 32.

A list of Patent Offices and Libraries at which Printed Specifications are placed for *free* public inspection is given with the first list of each quarter.

Complete sets of Printed Specifications may be obtained from the Government Printer, Melbourne, at 4d. per copy delivered over the counter. Specifications relating to one Group of manufacture, in order as issued, or such of the Specifications (in one Group) as may be selected from those already published, until 80 copies have been supplied, may be obtained on depositing £2. Parcels of 30 Specifications may be purchased at £1. Postage should be added to cheques if parcels are desired to be forwarded by mail. Single copies of Specifications, 1s. per copy, post free.

Printed Specifications are on sale at the Trade Marks Sub-offices, at Commonwealth Bank Buildings, Sydney, and at the Customs Houses, Brisbane, Adelaide, Perth, and Hobart.

Applications for Letters Patent for the period 1904 to 1910 were numbered from 1 to 20,337; for the period 1911 to 1915 from 1 to 18,302; a new series of numbers was commenced on the 1st January, 1916. To avoid confusion when purchasing Specifications, the **number**, **year**, and **name** of applicant for Letters Patent should be quoted.

Letters Patent Sealed.

Applications for enlargement of the time for payment of the renewal fee may be made on Form P.

The page and year quoted in last column refer to the Journal in which the notice of acceptance of Complete Specification was published.

Names of actual inventors, communicators, assignors, &c., who are not grantees, are added in parentheses after the name of the grantee.

No.	Date of Patent.	Name of Grantee.	Abbreviated Title	Page and Year.
	1916.	*12th July, 1920.*		
2025*	26 Feb.	J. W. Rooney	Tyre cover protector	11/*17*
	1919.			
10,045	6 Feb.	A. B. Robertson	Milking pulsators	175/*20*
10,390	13 Mar.	F. Heaton	Milking machine teat cups	318/*20*
10,726	10 Apr.	J. Inglis	Harness	385/*20*
12,642	26 Sept.	J. P. Hunt	Oil gas heating	356/*20*
	1918.	*14th July, 1920.*		
9282	15 Nov.	Plymel 1914 Ltd. (A. E. Kellam)	Paint manufacture	281/*20*
	1919.			
10,278	3 Mar.	The Hoover Suction Sweeper Co. (H. E. Hoover)	Suction sweepers	356/*20*
10,914	2 May	B. J. Smart & R. A. Broun	Destruction of rabbits	356/*20*
10,915	2 May	Cooper Engineering Co. Ltd. (H. C. Wright)	Liquid spray tank	356/*20*
11,763	10 July	J. Eves (F. Goodhall)	Baking ovens	385/*20*

Letters Patent Sealed—*continued.*

No.	Date of Patent.	Name of Grantee.	Abbreviated Title.	Page and Year.
	1919.		*15th July, 1920.*	
9794	13 Jan.	Lilian L. Burkett	Spouting fastener	356/*20*
10,430	17 Mar.	A. N. Beare	Adjustable chairs	419/*20*
10,461	20 Mar.	E. C. C. Luck	Lamb marker and emasculator	281/*20*
10,616	31 Mar.	H. T. Gill & H. Lucas	Safety razors	419/*20*
11,062	10 May	A. F. Mollison & S. Winchester	Treatment of skins	419/*20*
11,168	21 May	M. Jones	Clothes-pegs	419/*20*
11,619	30 June	C. W. Le Plastrier (R. Sime)	Traction coupling	419/*20*
11,970	31 July	Acushnet Process Co. Inc. (T. F. Furness & P. E. Young)	Rubber and cotton from waste	385/*20*
11,972	31 July	Aktiebolaget Svenska Kugghjulsfabriken (E H. Wingqvist)	Gear wheels	419/*20*
12,040	6 Aug.	Auto-Ordnance Corp. (O. V. Payne)	Fire-arms	419/*20*
12,205	21 Aug.	R. E. Huggins (R. E. Huggins & W. Shrubsole)	Grading machines	419/*20*
12,267	26 Aug.	W. G. Cook	Concrete-slab buildings	419/*20*
	1918.			
12,630	16 Sept.	H. H. Creasey, W. H. Becket, & The Parkinson Stove Co. Ltd.	Water heaters	419/*20*
	1919.			
12,822	8 Oct.	W. H. Dixon	Match-boxes	419/*20*
12,972	21 Oct.	M. Ryan	Injector	419/*20*

* Extended time for Sealing allowed under Regulation 8 of the Patents (Temporary) Regulations, 1914. Cf. Notice "Applications in respect of which Complete Specifications have been Accepted, but on which Letters Patent have not been Sealed." Vol. 28, page 327.

Renewal Fees Paid.

(Names in parentheses indicate original grantees.)

1913.

No.	Name.	Abbreviated Title.	Paid up to—
9761	Ford Sherington Ltd.	Sheet metal receptacles	15th July, 1927
9798	Gates, H. G. & A. E., & Cameron, D.	Pan closet cabinet	18th July, 1927
9805	Brown, J.	Brush appliance for removing curtain poles, &c.	19th July, 1927
9816	Meinzolt, C. C.	Pianofortes	21st July, 1927
9983	Palmer, J. F. J., & Lindner, A.	Portable stove	1st Aug., 1927
10.005	Hume, G. W.	Gas controllers	4th Aug., 1927
10,006	Hume, G. W.	Gas controllers	4th Aug., 1927
10,110	Parsons, The Hon. Sir C. A.	Propellers	12th Aug., 1927
10,361	Vergé, A. E.	Derivates of toluene	2nd Sept., 1927
10,362	Vergé, A. E.	Gelatine explosive	2nd Sept., 1927

Renewal Fees Paid—*continued.*

1914.

No.	Name.	Abbreviated Title.	Paid up to—
11,764	Higgins, A. H., Stenning, W. W., & Minerals Separation Ltd.	Ore concentration	25th Sept., 1927
14,345	Reader, C. L. De W. ...	Spraying devices	3rd Sept., 1927
14,346	Reader, C. L. De W. ...	Spraying viscous materials ...	4th Sept., 1927

Patents Void through Non-payment of Renewal Fees.

(Names in parentheses indicate original grantees.)

1912.

No.	Name.	Abbreviated Title.	Patent Ceased
5691	Mitchell, A. H.	Luffing cranes	15th July, 1919
5695	Colley, G., & Horton, W. ..	Machine for cutting cloth ...	15th July, 1919
5697	Lambert, W. A.	Power transferring apparatus ...	15th July, 1919
5698	Shaw, E.	Decanting petrol, &c.	15th July, 1919
5700	Moretti, R.	Electric dischargers	15th July, 1919
5704	Butement, T.	Steel-concrete story posts and girders	16th July, 1919
5707	Cook, H. R.	Reversing fabric articles during manufacture	16th July, 1919
5713	Th. Goldschmidt	Joining ends of rails	28th July, 1918
5714	Propert, T. G. & A. H. ...	Wind screen joint	16th July, 1919
5716	Boyle, J. T.	Baby chair, perambulator, and swing	17th July, 1919
5720	Carr, J.	Charcoal burning retorts ...	17th July, 1919
5723	Wolseley Sheep Shearing Machine Co. Ltd. (Paget, L. O.)	Milking machines	17th July, 1919
5727	Freeman, S.	Swingletree attachments ...	17th July, 1919
5731	Williams, H.	Converting reciprocating into rotary motion	18th July, 1918
5741	Electric Boat Co. (Spear, L. Y., & Grieshaber, H. E.)	Submersible boat construction ...	5th Aug., 1918
5743	Constantine, W., Mulheron, P., & McGrath, J. J.	Destruction of prickly pear ...	18th July, 1919
5744	Holcombe, A. W. C.	Windmill	18th July, 1919
5747	Bowser, G. M.	Excavators	19th July, 1919
5750	Federal Ore Co. No Liability ...	Treatment of auriferous selenide ore	19th July, 1919
5757	Madsen, F. H.	Machines for cutting corrugated iron, &c.	19th July, 1919

R. G. FERGUSON,
Acting Commissioner of Patents.

Printed and Published for the DEPARTMENT OF PATENTS, COMMONWEALTH OF AUSTRALIA,
by ALBERT J. MULLETT, Government Printer for the State of Victoria.

DEPARTMENT OF PATENTS.—PRICE LIST OF PUBLICATIONS.

Patents, Trade Marks, and Designs Acts are on sale at the Government Printing Offices in Sydney, Brisbane, Adelaide, Perth, and Hobart.

Printed Specifications of Inventions and Regulations under Patents, Trade Marks, and Designs Acts are on sale at the Trade Marks Sub-offices, at Commonwealth Bank Buildings, Sydney, and at the Customs Houses, Brisbane, Adelaide, Perth, and Hobart.

Publications in the following list are on sale at the Government Printing Office Melbourne:—

	Price.		Price.
Patents Act 1903	8d.	Patents Act 1909	3d.
Patents Act 1906	3d.	Patents Act 1903–1909 ...	1s.

	Price.
Patents, Trade Marks and Designs Act 1914 (No. 15)	3d.
Patents, Trade Marks and Designs Act (No. 2) 1914 (No. 16)	3d.
Patents, Trade Marks and Designs Act 1915 (No. 8)	3d
Patents Act (Partial Suspension) Act 1916 (No. 13)	3d.
Patents Regulations 1912	1s. 9d.
Statutory Rules 1914, Nos. 174, 188; 1916, Nos. 66, 220; 1919, Nos. 29, 30; 1920, No. 61 ... ... each	3d.
Commonwealth of Australia Gazettes—Patent Office Special Numbers. Nos. 34, 49, 52, 56, 60, 69, 72 of 1904; No. 2 of 1905 ... ... each	4d.
Classification of Manufactures and Word Index (edition of 1916, 280 pp.) ...	2s. 6d
Library Classed Catalogue, including supplement (*post free*)	1s.

The Australian Official Journal of Patents (*post free*)—

Weekly Numbers, published every Tuesday ... . each	6d.
Annual Subscription (including Volume of Statistics and Indexes) .,. ...	25s.

Complete Annual Volumes—

Journals.	Indexes.	Journals.	Indexes.
...	Vol. 1, 1904	Vol. 16, 1912	Vol. 17, 1912
Vol. 2, 1905	Vol. 3, 1905	Vol. 18, 1913	Vol. 19, 1913
Vol. 4, 1906	Vol. 5, 1906	Vol. 20, 1914	Vol. 21, 1914
Vol. 6, 1907	Vol. 7, 1907	Vol. 22, 1915	Vol. 23, 1915
Vol. 8, 1908	Vol. 9, 1908	Vol. 24, 1916	Vol. 25, 1916
Vol. 10, 1909	Vol. 11, 1909	Vol. 26, 1917	Vol. 27, 1917
Vol. 12, 1910	Vol. 13, 1910	Vol. 28, 1918	Vol. 29, 1918
Vol. 14, 1911	Vol. 15, 1911	Vol. 30, 1919	Vol. 31, 1919

Vol. of Journal with corresponding Vol. of Indexes	25s
Vols. of Indexes only may be obtained at 7s. 6d. each from Vol. 1 to Vol. 17, and at 10s. each from Vol. 19 onwards	

Printed Copies of Specifications—

Single copies (including postage)	1s.
Parcels of 30 specifications (exclusive of postage)	20s.
Specifications of one Group as issued (up to 80 copies), subscription in advance (exclusive of postage)	40s.
Complete sets as issued (exclusive of postage) ... ...per copy	4d.
Average weight for parcels posted:—30 specifications, 1½ lbs.; 50, 3 lbs.; 100, 4 lbs.	

The Australian Official Journal of Trade Marks (*post free*)—

Weekly Numbers, published every Friday ... ... each	6d.
Annual Subscription (including Vol. of Name Index and Proceedings) ...	25s.
Complete Annual Volumes—Vols. 1 to 14, Applications and Proceedings.	
Name Index and Proceedings, Commonwealth and State—	
1906–7; 1908; 1909; 1910; 1911; 1912 ... ... each	7s. 6d.
1913; 1914; 1915; 1916; 1917; 1918; 1919 ... ... each	..

Constituent Particulars of Trade Marks—

Vol. 1, 1906–7	7s. 6d.	Vol. 7, 1914	7s. 6d.
Vol. 2, 1907–9	15s.	Vol. 8, 1915	7s. 6d.
Vol. 3, 1909–10	11s. 6d.	Vol. 9, 1916	7s. 6d.
Vol. 4, 1911	7s. 6d.	Vol. 10, 1917	7s. 6d.
Vol. 5, 1912	7s. 6d.	Vol. 11, 1918	7s. 6d.
Vol. 6, 1913	7s. 6d.	Vol. 12, 1919	7s. 6d.
Trade Marks Act 1905	8d.	Trade Marks Act 1905–1912 ...	8d.
Trade Marks Act 1919 (No. 7) ...	3d.		

Trade Marks Regulations 1913	1s. 3d.
Trade Marks Rules—Statutory Rules 1914, Nos. 8, 175, 189; 1916, Nos. 64, 97, 221 ... ... each	3d.
Designs Act 1906 .. ... 5d. | Designs Act 1912	3d.
Designs Regulations 1906	5d.
Designs Rules—Statutory Rules 1914, Nos. 176, 190; 1916, Nos. 65, 222; 1919, 22 ... ... each	3d.
Designs Indexes—1909, 1910, 1911, 1912, 1913, 1914, 1915, 1916, 1917, 1918, and 1919 ... ... each	1s.

Application Forms according to the Schedules to the Patents Act 1903–1909, Trade Marks Act 1905–1912, Designs Act 1906–1912 and the Patents, Trade Marks and Designs Act 1914–1915, may be obtained on application at the Department of Patents, Second Floor, Railway Buildings, Flinders-street, Melbourne.

NOTICE.

Sections 106 and 107 of the *Patents Act* 1903–1909 provide that—

"106. Every person whose name is enrolled in the Register of Practitioners to be kept at the Principal Registry of the High Court or whose name is enrolled as a solicitor of the Supreme Court of a State may practise as a patent attorney without passing the prescribed examination and without being registered as a patent attorney."

"107. No person shall practise or act or describe himself as a patent attorney or as a patent agent or as an agent for obtaining patents unless he is registered or entitled to practise as a patent attorney under this Act.

Penalty: One hundred pounds."

Regulations 155 and 156 of the Patents Regulations 1912 provide that—

"155. A Register shall be kept by the Commissioner for the Registration of Patent Attorneys."

"156. Patent attorneys shall be entitled to prepare all documents and deeds and transact all business and proceedings for the purposes of the Act and these Regulations and the State Patents Act so far as concerns business in the Patent Office or before the Law Officer, and communications between Patent Attorneys and their clients shall be privileged to the same extent as communications between solicitor and client."

An applicant for a patent or a party to any matter before the Department of Patents may prepare the necessary documents for presentation to, and prosecute the application or matter before, the Department, but, unless experienced in these matters, he is advised to employ a competent patent attorney.

The Department of Patents does not assist in the selection of a patent attorney.

A list of registered patent attorneys, alphabetically arranged, is subjoined:—

Abell, Edward Garland, 187 Queen-street, Brisbane, Qld.

Allen, Thomas Con, Equitable Buildings, George-street, Sydney, New South Wales.

Anderson, Alexander (*Charles E. Bernays*), Fitzroy Buildings, 125 Adelaide-street, Brisbane, Queensland.

Ashton, William A., care of Clem. A. Hack, Collins House, Collins-street, Melbourne, Victoria.

Bayston, Frank (*W. S. Bayston and Son*), Market Buildings, 441 Collins-street, Melbourne, Victoria.

Bayston, Walter Smythe (*W. S. Bayston and Son*), Market Buildings, 441 Collins-street, Melbourne, Victoria.

Bernays, Charles Edwin (*Charles E. Bernays*), Fitzroy Buildings, 125 Adelaide-street, Brisbane, Queensland.

Bodycomb, George Edward, 282 High-street, St. Kilda, Victoria.

Bonnerup, Peter Madsen, A.M.P. Chambers, St. George's Terrace and William-street, Perth, Western Australia.

Burgess, Charles Stanley, 49 William-street, Norwood, South Australia.

Callinan, Anthony James, National Mutual Buildings, 395 Collins-street, Melbourne, Victoria; and Ferry's Chambers, 14 Castlereagh-street, Sydney, New South Wales.

Collison, Arthur Gore (*Collison and Co.*), Eagle Chambers, King William-street, Adelaide, South Australia; and 483 Collins-street, Melbourne, Victoria.

Collison, Charles Nicholas (*Collison and Co.*), 483 Collins-street, Melbourne, Victoria; and Eagle Chambers, King William-street, Adelaide, South Australia.

Cooke, John Herbert, 75 King William-street, Adelaide, South Australia.

Davis, William Joseph, Bull's Chambers, 14 Moore-street, Sydney, New South Wales.

Graham, Charles Edward (*Edwd. Waters and Sons*), Culwulla Chambers, 67 Castlereagh-street, Sydney, N.S.W.; and Royal Insurance Buildings, 414–418 Collins-street, Melbourne, Victoria.

Griffith, Arthur (*Griffith and Hassel*), Record Chambers, 77 Castlereagh-street, Sydney, New South Wales.

Hack, Clement Alfred, Collins House, Collins-street, Melbourne, Victoria.

Hedges, Percy (*Hedges and Co.*), Fink's Buildings, Elizabeth and Flinders streets, Melbourne, Victoria.

Hendley, Sidney, Fink's Buildings, Elizabeth and Flinders streets, Melbourne, Victoria.

Hepburn, Charles Graham, Gladstone Chambers, 90 Pitt-street, Sydney, New South Wales.

Kelson, Victor Jasper, 17 Queen street, Melbourne, Vic.

Le Plastrier, Cecil Woods (*Phillips, Ormonde (Inc.) Pty. Ltd.*), Lombard Buildings, 17 Queen-street, Melbourne, Vic.

Madden, Augustine Thomas, 454 Collins-street, Melbourne, Victoria.

Manners, William George, corner of Maritana and Egan streets, Kalgoorlie, Western Australia.

Massey, Albert Richard William, Challis House, Martin-place, Sydney, New South Wales.

Massey, George, Post Office Chambers, Pitt-street, Sydney, New South Wales.

Michell, Anthony George Maldon, 450 Collins-street, Melbourne, Victoria.

Monash, John, Collins House, 360 Collins-street, Melbourne, Victoria.

Neighbour, Arthur George Lloyd, care of Anthony James Callinan, 395 Collins-street, Melbourne, Victoria; and 14 Castlereagh-street, Sydney, New South Wales.

Newell, Percy Harwood, care of Fred Walsh, George and Wynyard streets, Sydney, New South Wales.

Newton, Perceval Manfield, Fink's Buildings, Elizabeth-street, Melbourne, Victoria; and Challis House, Martin-place, Sydney, New South Wales

Newton, William Manfield, Challis House, Martin-place, Sydney, New South Wales.

Phillips, Edwin (*Phillips, Ormonde (Inc.) Pty. Ltd.*), Lombard Buildings, 17 Queen-street, Melbourne, Victoria.

Sachse, Arthur Otto, 454 Collins-street, Melbourne Victoria.

Sigmont, Walter (*Edwd. Waters and Sons*), Royal Insurance Buildings, 414-418 Collins-street, Melbourne, Victoria and Culwulla Chambers, 67 Castlereagh-street, Sydney, New South Wales.

Smith, Hider, 95-97 Swan-street, Richmond, Melbourne, Victoria.

Sparrow, Richard, Austral Chambers, Barrack-street, Perth, Western Australia.

Spruson, Wilfred Joseph, "Daily Telegraph" Buildings, King-street, Sydney, New South Wales.

Stone, John Jasper, 30 Drummoyne-avenue, Drummoyne, Sydney, New South Wales.

Turri, George Garibaldi (*G. G. Turri and Co.*), "The Rialto," 497-499 Collins-street, Melbourne, Victoria.

U'Ren, George Albert (*Phillips, Ormonde (Inc.) Pty. Ltd.*), Lombard Buildings, 17 Queen-street, Melbourne, Victoria.

Walker, William, 156 King-street, Sydney, N.S.W.

Walsh, Fred, George and Wynyard streets, Sydney, New South Wales.

Waters, Edward (*Edwd. Waters and Sons*), Royal Insurance Buildings, 414-418 Collins-street, Melbourne, Victoria; and Culwulla Chambers, 67 Castlereagh-street, Sydney, New South Wales